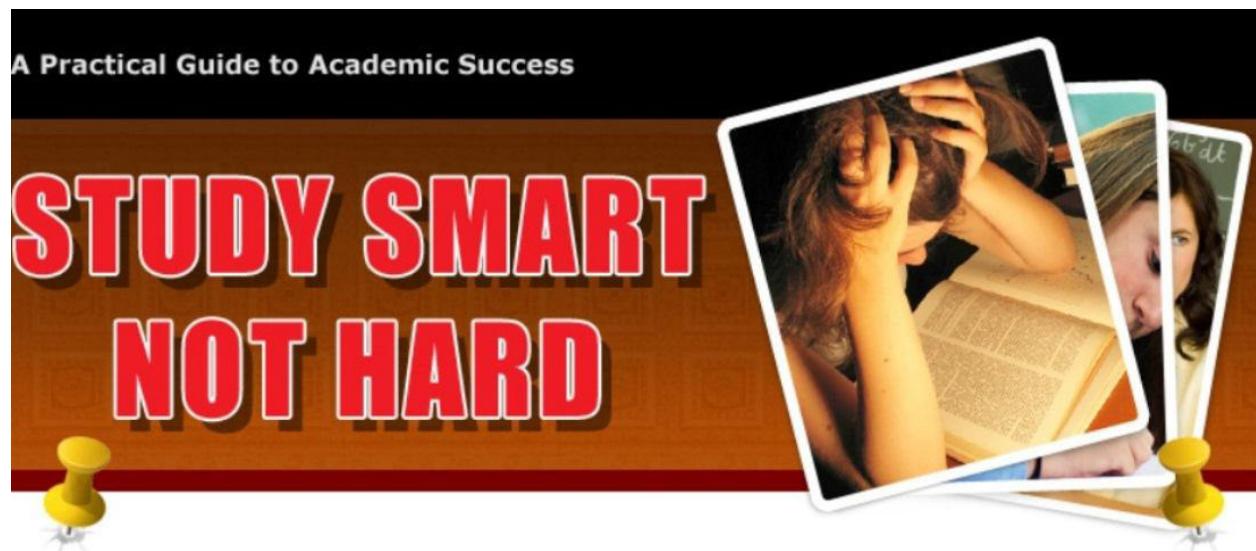


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# MANAGEMENT (EE/ME/CE/EJ/CM/IF-GROUP)

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## Contents: Theory

Topic and Contents	Hours	Marks
<b>Topic 1: Overview of Business</b> <b>Specific Objectives</b> <ul style="list-style-type: none"> <li>➤ State various business types and sectors</li> <li>➤ Describe importance of globalisation</li> </ul> 1.1. Types of Business <ul style="list-style-type: none"> <li>● Service</li> <li>● Manufacturing</li> <li>● Trade</li> </ul> 1.2. Industrial sectors Introduction to <ul style="list-style-type: none"> <li>● Engineering industry</li> <li>● Process industry</li> <li>● Textile industry</li> <li>● Chemical industry</li> <li>● Agro industry</li> <li>● IT industry</li> <li>● Banking, Insurance, Retail, Hospitality, Health Care</li> </ul> 1.3 Globalization <ul style="list-style-type: none"> <li>● Introduction</li> <li>● Advantages &amp; disadvantages with respect to India</li> </ul>	02	06
<b>Topic 2: Management Process</b> <b>Specific Objectives</b> <ul style="list-style-type: none"> <li>➤ State various management principles</li> <li>➤ Describe different management functions</li> </ul> 2.1 What is Management? <ul style="list-style-type: none"> <li>● Evolution</li> <li>● Various definitions of management</li> <li>● Concept of management</li> <li>● Levels of management</li> <li>● Administration &amp; management</li> <li>● Scientific management by F.W.Taylor</li> </ul> 2.2 Principles of Management (14 principles of Henry Fayol)         2.3 Functions of Management <ul style="list-style-type: none"> <li>● Planning</li> <li>● Organizing</li> <li>● Directing</li> <li>● Controlling</li> <li>● Decision Making</li> </ul>	08	16
<b>Topic 3: Organisational Management</b> <b>Specific Objectives</b> <ul style="list-style-type: none"> <li>➤ Compare different forms of organisation , ownership for a specific business</li> <li>➤ Describe types of departmentation</li> </ul> 3.1 Organization : <ul style="list-style-type: none"> <li>● Definition</li> </ul>	08	16

<ul style="list-style-type: none"> <li>• Steps in organization</li> </ul> <p><b>3.2 Types of organization</b></p> <ul style="list-style-type: none"> <li>• Line</li> <li>• Line &amp; staff</li> <li>• Functional</li> <li>• Project</li> </ul> <p><b>3.3 Departmentation</b></p> <ul style="list-style-type: none"> <li>• By product</li> <li>• By process</li> <li>• By function</li> </ul> <p><b>3.4 Principles of Organisation</b></p> <ul style="list-style-type: none"> <li>• Authority &amp; Responsibility</li> <li>• Span of Control</li> <li>• Effective Delegation</li> <li>• Balance ,stability and flexibility</li> <li>• Communication</li> </ul> <p><b>3.5 Forms of ownership</b></p> <ul style="list-style-type: none"> <li>• Proprietorship</li> <li>• Partnership</li> <li>• Joint stock</li> <li>• Co-operative Society</li> <li>• Govt. Sector</li> </ul>		
<p><b>Topic 4: Industrial Safety and Legislative Acts</b></p> <p><b>Specific Objectives</b></p> <ul style="list-style-type: none"> <li>➢ Describe types of accidents &amp; safety measures</li> <li>➢ State provisions of industrial acts.</li> </ul> <p><b>4.1 Safety Management</b></p> <ul style="list-style-type: none"> <li>• Causes of accidents</li> <li>• Types of Industrial Accidents</li> <li>• Preventive measures</li> <li>• Safety procedures</li> </ul> <p><b>4.2 Industrial Legislation - Necessity of Acts</b></p> <p>Important Definitions &amp; Main Provisions of following acts:</p> <ul style="list-style-type: none"> <li>• Indian Factory Act</li> <li>• Workman Compensation Act</li> <li>• Minimum Wages Act</li> </ul>	08	14
<p><b>Topic 5: Financial Management (No Numerical)</b></p> <p><b>Specific Objectives</b></p> <ul style="list-style-type: none"> <li>➢ Explain functions of financial management</li> <li>➢ State the sources of finance &amp; types of budgets.</li> <li>➢ Describe concepts of direct &amp; indirect taxes.</li> </ul> <p><b>5.1 Financial Management- Objectives &amp; Functions</b></p> <p><b>5.2 Capital Generation &amp; Management</b></p> <ul style="list-style-type: none"> <li>• Types of Capitals - Fixed &amp; Working</li> <li>• Sources of raising Capital - Features of Short term, Medium Term &amp; Long Term Sources</li> </ul> <p><b>5.3 Budgets and accounts</b></p> <ul style="list-style-type: none"> <li>• Types of Budgets</li> </ul>	08	16

<ul style="list-style-type: none"> <li>• Fixed &amp; Variable Budget - Concept</li> <li>• Production Budget - Sample format</li> <li>• Labour Budget - Sample format</li> <li>• Profit &amp; Loss Account &amp; Balance Sheet - Meaning, sample format, meaning of different terms involved.</li> </ul> <p>5.4 Meaning &amp; Examples of</p> <ul style="list-style-type: none"> <li>• Excise Tax</li> <li>• Service Tax</li> <li>• Income Tax</li> <li>• Value Added Tax</li> <li>• Custom Duty</li> </ul>		
<b>Topic 6: Materials Management (No Numerical)</b>		
<p><b>Specific Objectives</b></p> <ul style="list-style-type: none"> <li>➢ Describe concept of inventory, ABC analysis &amp; EOQ.</li> <li>➢ Describe purchase functions &amp; procedures</li> <li>➢ State features of ERP &amp; MRP</li> </ul> <p>6.1 Inventory Concept, its classification, functions of inventory          6.2 ABC Analysis - Necessity &amp; Steps          6.3 Economic Order Quantity Concept, graphical representation, determination of EOQ          6.4 Standard steps in Purchasing          6.5 Modern Techniques of Material Management</p> <ul style="list-style-type: none"> <li>• Material Resource Planning (MRP) - Functions of MRP, Input to MRP, Benefits of MRP</li> <li>• Enterprise Resource Planning (ERP) - Concept, list of modules, advantages &amp; disadvantages of ERP</li> </ul>	08	16
<b>Topic 7 Quality Management</b>		
<p><b>Specific Objectives</b></p> <ul style="list-style-type: none"> <li>➢ State Principles of Quality Management</li> <li>➢ Describe Modern Technique &amp; Systems of Quality Management</li> </ul> <p>7.1 Meaning of Quality</p> <ul style="list-style-type: none"> <li>Quality Management System – Activities, Benefits</li> <li>Quality Control - Objectives, Functions, Advantages</li> <li>Quality Circle - Concept, Characteristics &amp; Objectives</li> <li>Quality Assurance – Concept, Quality Assurance System</li> </ul> <p>7.2 Meaning of Total Quality and TQM</p> <ul style="list-style-type: none"> <li>Components of TQM – Concept, Elements of TQM, Benefits</li> </ul> <p>7.3 Modern Technique &amp; Systems of Quality Management like Kaizen,5'S',6 Sigma</p> <p>7.4 ISO 9001:2000 - Benefits, Main clauses.</p>	06	16
<b>Total</b>	<b>48</b>	<b>100</b>

## Chapter-1

### Overview of Business

#### 1.1 Introduction



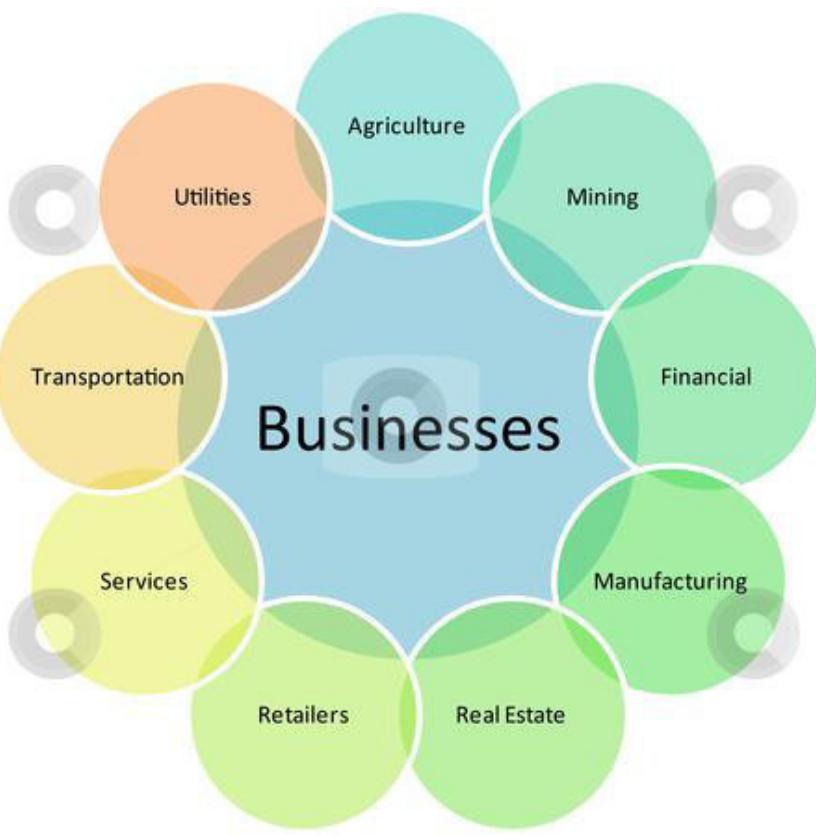
- Organization of an Industry is a challenging task for technical people.
- The main object of technical education is to set country's economic development and to make it **worthy** (लायक) of competition in world market.
- Technicians, Engineers and Scientists play an important key role in the activities of the economic development.

#### 1.2 Objectives of Economic Development

- To achieve technological up-gradation and **diversification** (दिव्या बदल) into high-tech areas by introduction of qualified persons into the industry.
- To **inculcate** (पाठ करने )the spirit of self-employment to the educate person.

#### 1.3 Types of Business

- Service Sector
- Manufacturing Sector
- Trade Sector
- Industrial Sector



### 1.3.1 Service Sector

- It is sector which constitutes a very different economic category and provides the service to the peoples.
- “Business Service” includes ( Management Function, Research & Development, Retailing, Administration, Banking, Insurance etc)
- It is transient( आस्थारी ) in nature.
- It provided by Govt. or any other business.
- It cannot be stored nor transferred.
- It increases productive capacity of economy and rapid economic development.
- It contributes to national income and living standard of people.
- Some of examples are (SBI, LIC, BPO(Business Processing Outsourcing), KPO(Knowledge Processing Outsourcing, Call Centers etc.)



### 1.3.2 Manufacturing Sectors

- It is the sector which deals with manufacturing of any product as per the requirements of the peoples.
- It examines the part of social and individual areas , the use of materials and the needs of peoples.
- Economy if this sector exists because of ( unlimited human needs and **scarce** ( कमी ) of resources).
- Economy has to decide which needs are more important and how to use scarce resources.
- Need of planning economic activities arises because of ( Limited Resources, Skilled manpower, Capital etc).
- Some advanced countries have succeeded in eliminating poverty because of scientific and technology developments. They achieved **abundance** ( अरप्त ) of production of goods with which they can satisfy the peoples.
- It can only be done with some planning, like( What to produce, What quality to produce, How to produce and How much to produce ).



### 1.3.3 Trade Sectors

- Trade is the process which takes place between buyer and seller. A producer might sell items or provide a service and customer pays for it, this is called ***trade***.
- Trade is also called commerce.i.e. ***activity of buying and selling, import and export.***
- A market is a place which allows a trade. The original trade is the **barter** ( अदला बदली ) i.e., exchange of goods and service.
- Trade b/w the two traders is called ***bi-lateral trade*** and Trade b/w three or more traders is called ***multi-lateral trade***.
- Trade policy is a ***set of rules and regulations which relate to trade***. Every country have some form trade policy with government formulating the policy.
- The purpose of trade policy is to help a nation's international trade run more smoothly, by setting clear standard and goals.
- The group of nations works together for beneficial trade which comes under GATT (***General Agreement of Tariff and Trade***).



### 1.3.4 Industrial Sector

It has various industries under this sector like, ***Engineering Industry, Process Industry, Textile Industry, Chemical Industry, Agro Industry***.

#### 1.3.4.1 Engineering Industry

- Engineers have to find out solutions to utilize the main elements of production like (men, ***money, machine, material and management***) with minimum cost.  
E.g.,( Civil, Electrical, Mechanical, Electronics, Chemical Engineering).



#### 1.3.4.2 Chemical Industry

- It consists of industries that produces industrial chemicals.
- These industries convert raw materials like (Oil, Natural Gas, Waste, Air, Metals etc) into different chemical product.  
E.g.,( Rubber, Petrol , Plastics etc.) companies.



#### 1.3.4.3 Agro Industry

- It consists of industries that uses the agricultural products and indulge in the process like **Harvesting** (ଫେର୍ମିଂ) in large scale, Processing and Packaging of farm products using modern equipment's.  
E.g.,(Tobacco, Sugar, Spices, Sugar, Tea, Juice) companies.



#### 1.3.4.4 Process Industry

- It consists of the industries that do different processes on the raw material to get the various products.
- These processes are carried out in various techniques and with various technologies which ensures quality.  
E.g,(Paper Products, Wood Products, Ceramics, Coal, Pharmaceuticals etc.) companies



#### 1.3.4.4 Textile Industry

- It consists of the industries dealing with design and manufacturing of textile products.
- It has various sector based on the raw materials used like (Cotton, Jute, Fibre, Wool etc.)  
E.g.,(Wool Industries, Cotton Industries, Fabrics Industries etc.)



### 1.4 Globalization

- **Globalization** is the process in which the different countries do their business and providing services to other countries .
- It helps in developing their economic, financial, trade and communication integration.
- The several organizations which are spread all over the world are called **MNC's(Multi National Companies)**.
- These MNC's are the giant firm with their head quarter located at one country but carrying variety of business in many foreign countries.

- This strategy of globalization had helped Indian economy a lot and to make India as one of the fastest growing economy.
- Globalization brought two new strategies of which helped Indian economy i.e., Liberalization and Privatization.
- **Liberalization** refers to a relaxation of previous government restrictions usually in such areas of social and economic policy. It allowed the industries to spread their business without any restrictions of govt.
- **Privatization** refers to the no interruption of govt. in the company's internal affairs like (Production, Profit, Loss, Management, Administration etc.). This turned the public sector companies to private sector companies.



### Advantages of Globalization:

- Resources of different countries are used for producing goods and services they are able to do most efficiently.
- Consumers get much wider variety of products to choose from.
- Consumers get the product they want at more competitive prices.
- Companies are able to procure input goods and services required at most competitive prices.
- Companies get access to much wider markets
- It promotes understanding and goodwill among different countries.
- Businesses and investors get much wider opportunities for investment.
- Adverse impact of fluctuations in agricultural productions in one area can be reduced by pooling of production of different areas.

### Disadvantages of Globalization:

- Developed countries can stifle development of undeveloped and under-developed countries.
- Economic depression in one country can trigger adverse reaction across the globe.
- It can increase spread of communicable diseases.
- Companies face much greater competition. This can put smaller companies, at a disadvantage as they do not have resources to compete at global scale.

### 1.4.1 GATT(General Agreement on Tariffs and Trade)

- **General Agreement on Tariffs and Trade (GATT)** was a multilateral agreement which allowed international trade.



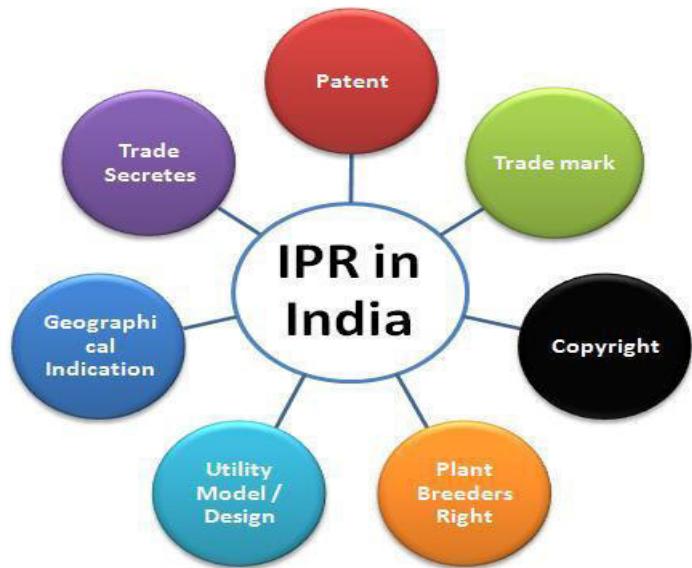
- According to its preamble (कायदा), its purpose was the " reduction of tariffs and elimination of other trade barriers (बंधन) for mutual advantage."
- GATT was signed in 1947 and lasted until 1994, when it was replaced by the World Trade Organization in 1995. The head quarter is situated in ***Geneva at Switzerland.***

## 1.5 WHAT IS AN IPR(Intellectual Property Right)?

- Intellectual** (बौद्धिक) **Property Rights** are legal rights, which result from intellectual activity in industrial, scientific, literary & artistic fields. These rights Safeguard creators and other producers of intellectual goods & services by granting them certain time-limited rights to control their use.
- The importance of intellectual property was first recognized in the Paris Convention (समीलन) for the **Protection of Industrial Property** (1883) and the Berne Convention for the **Protection of Literary and Artistic Works** (1886). Both treaties are administered by the World Intellectual Property Organization (WIPO).

## 1.6 Types of IPR

- Patents.
- Trademarks.
- Copyrights and related rights.
- Geographical Indications.
- Industrial Designs.
- Trade Secrets.
- Layout Design for Integrated Circuits.
- Protection of New Plant Variety.



### 1.6.1 Patent (एकाधीकार)

- A **patent** is an exclusive right granted for an invention, which is a product or a process that provides a new way of doing something, or offers a new technical solution to a problem. It provides protection for the invention to the owner of the patent.



- The protection is granted for a limited period, i.e 20 years. Patent protection means that the invention cannot be commercially made, used, distributed or sold without the patent owner's consent.
- A patent owner has the right to decide who may - or may not - use the patented invention for the period in which the invention is protected.
- The patent owner may give permission to, or license, other parties to use the invention on mutually agreed terms. The owner may also sell the right to the invention to someone else, who will then become the new owner of the patent.

### 1.6.2 Trademarks:

- *A trademark is a distinctive sign that identifies certain goods or services as those produced or provided by a specific person or enterprise.* It may be one or a combination of words, letters, and numerals.
- They may consist of drawings, symbols, three-dimensional signs such as the shape and packaging of goods, audible signs such as music or vocal sounds, fragrances, or colours used as distinguishing features.
- It provides protection to the owner of the mark by ensuring the exclusive right to use it to identify goods or services, or to authorize another to use it in return for payment. It helps consumers identify and purchase a product or service because its nature and quality, indicated by its unique trademark, meets their needs.
- The initial term of registration is for 10 years; thereafter it may be renewed from time to time.



### 1.6.3 Copyrights and related rights:

- *Copyright is a legal term describing rights given to creators for their literary and artistic works.*
- The kinds of works covered by copyright include: literary works such as novels, poems, plays, reference works, newspapers and computer programs; databases; films, musical compositions, and choreography; artistic works such as paintings, drawings, photographs and sculpture; architecture; and advertisements, maps and technical drawings.
- However, registering a copyright provides evidence that copyright subsists in the work & creator is the owner of the work.
- Creators often sell the rights to their works to individuals or companies best able to market the works in return for payment. These payments are often made dependent on the actual use of the work, and are then referred to as royalties.
- These economic rights have a time limit, (other than photographs) is for entire life of author and sixty years after creator's death.

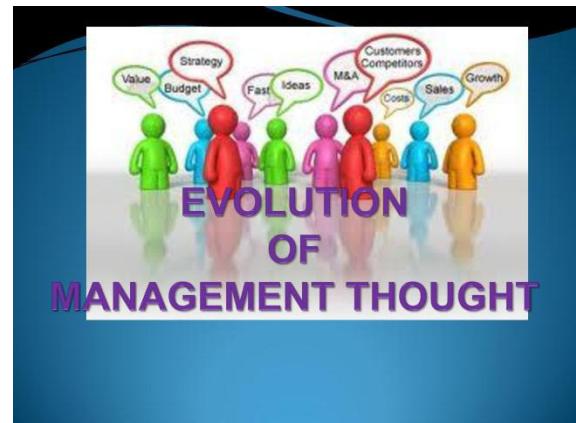


## Chapter-2

### Management Process

#### 2.1 Evolution of Management

- It is the growth and development of the management from the early 18<sup>th</sup> century to the 21<sup>st</sup> century.
- Different type of schools have been started to develop the management in different years.



#### 2.1.1 Types of Schools in evolution in management

##### Scientific Management School (18<sup>th</sup> Century):

- These schools concentrated on the need to increase the productivity.
- It developed true science of management, for performing each task effectively.
- Scientific selection of workers according to the task.
- To create friendly environment between management and labour.
- It includes theories of F.W. Taylor, Henry L. Gantt, Frank & Lillian Gilberth.

##### Classical Organization School (Early 19<sup>th</sup> Century):

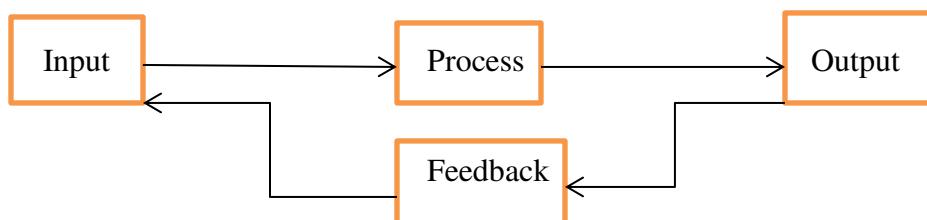
- It concentrated on the need for managing large complex organization.
- It includes theory of Henry Fayol's 14 principles.

##### Behavioral School (Middle 19<sup>th</sup> Century):

- It concentrated on behavior and management of frustration of workers.
- It stated various theories, which in-sighted sociology and psychology.
- It includes theories like, Human Relation or Hawthorne Studies and Maslow's Theory.

##### Management Science School (Middle 19<sup>th</sup> Century):

- It concentrated on analyzing the problem and proposing a course of action to management.
- It includes sophisticated mathematical models & charts to forecasting the future needs or problems.
- It includes theory like System Approach or System Oriented Process.



### Contingency Approach (19<sup>th</sup> Century):

- It was developed by managers, consultants and researchers.
- It identifies the technique which will be (in particular situation, under particular circumstances and in particular time), contribute to attainment of management goals.
- It includes theories like Dynamic Engagement Approach.

### 2.1.2 Management Definition

- According to **Harold Koontz**, "Management is the art of getting things done through others and with formally organised groups."
- According to **F.W. Taylor**, "Management is the art of knowing what you want to do and then seeing that they do it in the best and the cheapest may."
- According to **George R. Terry**, "Management Is a distinct process consisting of planning, organising, actuating and controlling; utilizing in each both science and art, and followed in order to accomplish pre-determined objectives."
- According to **Peter Drucker**, Management is a multipurpose organ that manages a business and manages Managers and manages Workers and work.

### 2.1.3 Concept of Management

- It is how the mind controls the human body and its function.
- Similarly **management (mind)** controls the various activities in the **(human body) organization**.
- **Management is the art of getting work done from people.**
- It is the process in which **4 M's in organization – Men, Machine, Materials, Money** is managed efficiently and profitably to complete the work given.

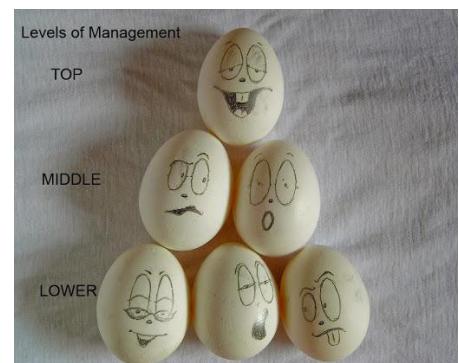


### 2.1.4 Three Levels of Management

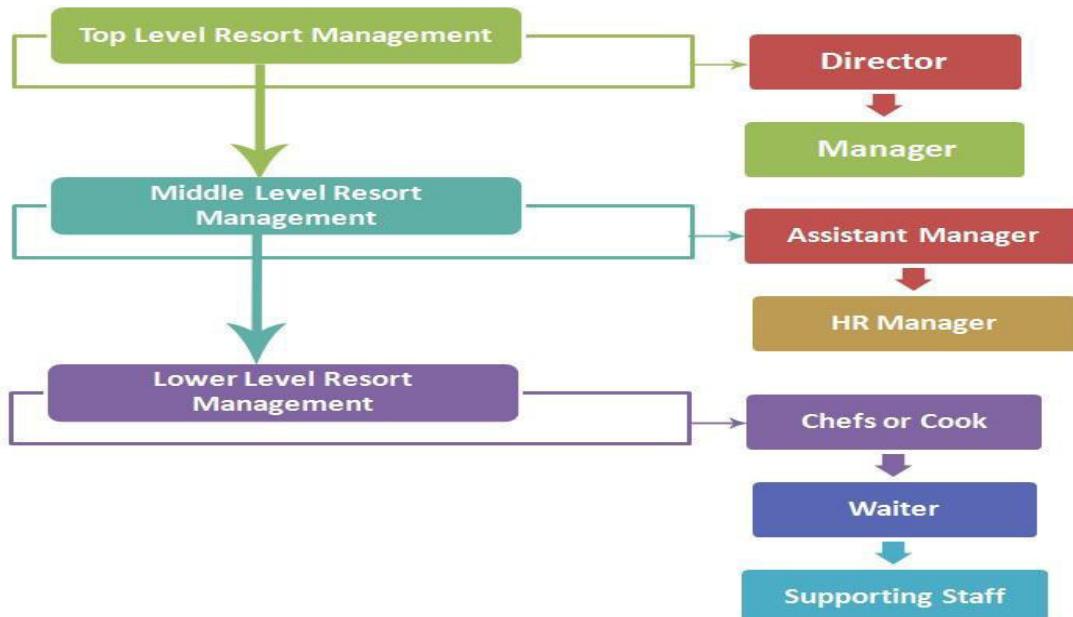
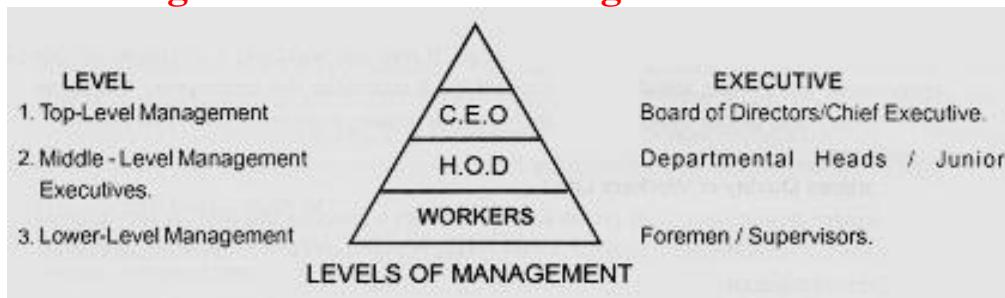
Generally, there are Three Levels of Management, viz.,

1. **Administrative or Top Level** of Management.
2. **Executive or Middle Level** of Management.
3. **Supervisory or Lower Level** of Management.

At each level, individual manager has to carry out different roles and functions.



## 2.1.4 Diagram of Levels of Management



hierarchystructure.com

## 2.1.4 Top Level of Management

- The **Top Level Management** consists of the **Board of Directors (BOD)** and the **Chief Executive Officer (CEO)**.
- **The Chief Executive Officer is also called General Manager (GM) or Managing Director (MD) or President.**
- **The Board of Directors is the representatives of the Shareholders**, i.e. they are selected by the Shareholders of the company.
- Similarly, the Chief Executive Officer is selected by the Board of Directors of an organization.

**The main role of the top level management is summarized as follows:-**

1. The top level management determines the objectives, policies and plans of the organization.
2. The top level management does mostly the work of thinking, planning and deciding. Therefore, they are also called as the Administrators and the Brain of the organization.
3. They spend more time in planning and organizing.

4. They prepare long-term plans of the organization which are generally made for 5 to 20 years.
5. The top level management has maximum authority and responsibility. The success or failure of the organization largely depends on their efficiency and decision making.
6. They require more conceptual skills and less technical Skills.

#### **2.1.4 Middle Level of Management**

- *The Middle Level Management consists of the Departmental Heads (HOD), Branch Managers, and the Junior Executives.*
- *The Departmental heads are Finance Managers, Purchase Managers, etc. The Branch Managers are the head of a branch or local unit. The Junior Executives are Assistant Finance Managers, Assistant Purchase Managers, etc.*
- The Middle level Management is selected by the Top Level Management.

#### **The middle level management emphasizes more on following tasks:-**

1. Middle level management gives recommendations (advice) to the top level management.
2. It executes (implements) the policies and plans which are made by the top level management.
3. It co-ordinate the activities of all the departments.
4. They also have to communicate with the top level Management and the lower level management.
5. They spend more time in coordinating and communicating.
6. They prepare short-term plans of their departments which are generally made for 1 to 5 years.
7. The middle Level Management has limited authority and responsibility.

#### **2.1.4 Lower Level of Management**

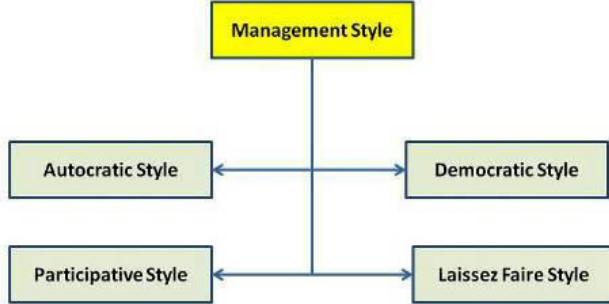
- *The lower level management consists of the Foremen and the Supervisors.*
- They are selected by the middle level management. It is also called Operative / Supervisory level or First Line of Management.

#### **The lower level management performs following activities:-**

1. Lower level management directs the workers / employees.
2. They develop morale in the workers.
3. It maintains a link between workers and the middle level management.
4. The lower level management informs the workers about the decisions which are taken by the management. They also inform the management about the performance, difficulties, feelings, demands, etc., of the workers.
5. They spend more time in directing and controlling.
6. The lower level managers make daily, weekly and monthly plans.

- They have limited authority but important responsibility of getting the work done from the workers.

## 2.1.4 Different Types of Management



### **Democratic management:**

- In a **democratic style**, management will make decisions which are agreed upon by the majority of employees.

### **Autocratic Management:**

- In **autocratic style**, decisions are made quickly and forcefully by management without involvement from anyone else.

### **Laissez-faire management:**

- In **Laissez-faire style**, management will take a back seat role in the company, providing guidance when needed; the employees are allowed to let their own ideas and creativity flourish in their specific areas.

### **Paternalistic Management:**

- In **paternalistic style**, management encourages feedback from the workers to the leaders, essentially to maintain good morale and loyalty.

## 2.1.5 Management and Administration

### **Key difference:**

- Administration frames the objectives and policies of an organization.**
- Management implements these policies and objectives.**

## 2.1.5 Administration ( प्रशासन )

- The administration is the top level of the organization with the decisive functions.** They are responsible for determining the policies and objectives of the organization or the firm.
- The **main administrative function is handling** the business aspects of the firm, such as finance. **Other administrative functions usually include planning, organizing, staffing, directing, controlling and budgeting.**
- Administration must integrate leadership and vision, to organize the people and resources, in order to achieve common goals and objectives for the organization.



## 2.1.5 Management (प्रबन्ध)

- **Management, on the other hand is the middle level executive function.** They implement the policies and objectives as decided by the administration.
- Management is responsible for carrying out the strategies of the administration.
- Management usually incorporates the employees of the firm in return for remuneration.
- Motivation is the key factor of a management. Management must motivate and handle the employees.
- It can be said that management is directly under the control of administration.



### Further comparison between management and administration:

	<b>Management</b>	<b>Administration</b>
Definition	Art of getting things done through others by directing their efforts towards achievement of pre-determined goals.	Formulation of broad objectives, plans & policies.
Nature	executing function, doing function	decision-making function, thinking function
Scope	Decisions within the framework set by the administration.	Major decisions of an enterprise as a whole.
Level of authority	Middle level activity	Top level activity
Status	Group of managerial personnel who use their specialized knowledge to fulfill the objectives of an enterprise.	Consists of owners who invest capital in and receive profits from an enterprise.
Usage	Used in business enterprises.	Popular with government, military, educational, and religious organizations.
Influence	Decisions are influenced by the values, opinions, beliefs and decisions of the managers.	Influenced by public opinion, government policies, customs etc.
Main functions	Motivating and controlling	Planning and organizing
Abilities	Handles the employees.	Handles the business aspects such as finance.

## 2.1.6 Scientific Management by F.W. Taylor

- **Scientific Management tries to increase productivity by increasing efficiency and wages of the workers.**
- It finds out the best method for performing each job.
- It provides Scientific Training and Development to the employees.



- It tries to produce maximum output by fixing,
  - *Performance Standards.*
  - *Differential Piece-Rate System.*
  - *Functional Foremanship.*
  - *Mental Revolution.*
  - *Time Study.*
  - *Fatigue & Motion Study.*
  - *Gantt Charts.*

## 2.1.6 Principles of Scientific Management

### 1. Performance Standards

- *F.W. Taylor found out that there were no scientific performance standards i.e., how much work a worker should do in one hour or in one day.*
- He fixed performance standards for time, cost, and quality of work, which lead to uniformity of work. As a result, the efficiency of the workers could be compared with each other.

### 2. Differential (**अन्तरीय**) Piece Rate System

- Taylor observed that workers did as little work as possible. He felt that under existing wage system, an efficient worker gained nothing extra. So, Taylor used the *Differential Piece (unit) Rate System.*

**Under differential piece rate system, a standard output was first fixed. Then two wage rates were fixed as follows:-**

1. *Low wage rate* was fixed for those workers who did not produce the standard output.
2. *Higher wage rate* was fixed for those workers who produced the standard output or who produced more than the standard output.
3. Because of this system, the inefficient workers will try to improve their efficiency, and the efficient workers will be motivated to maintain or improve their production capacity.



### 3. Functional Foremanship

*Taylor started "Functional Foremanship". Here, 8 foremen (lower level manager or supervisor) are required to supervise the workers.* This is because one foreman cannot be an expert in all the functions.

Taylor's functional foremanship consists of two groups of supervisors:-

1. At the Planning Level or Office Level.
2. At the Doing Level or Factory Level.
- 3.

### 4. Mental Revolution

*Taylor introduced the concept of "Mental Revolution". He said that the management and workers should have a positive attitude towards each other.*

## 5. Time Study

*Time study means to record the time taken for doing each part of a job. The full job is first observed and analyzed. Then it is divided into different elements (parts). Later the time taken for doing each part of the job is recorded.*

## 6. Fatigue (थकवा) and Motion Study

*Frank and Lillian Gilbreth (Husband and Wife) introduced fatigue and motion studies. Fatigue and motion studies find out and remove unnecessary and wasteful movements while doing the job.*

## 7. Gantt Charts

*Henry Gantt invented the Gantt chart. This chart shows the planned work and the completed work at each stage of production.* It also shows the time taken to do the work.

Gantt chart is the basis for following two concepts:-

1. The Critical Path Method (CPM), and
2. The Program Evaluation Review Technique (PERT).

## 2.2 HENRI FAYOL'S 14 Principles of Management



**DIVISION OF WORK:** Work should be divided among individuals and groups to ensure that effort and attention are focused on special portions of the task.

**AUTHORITY:** The concepts of Authority and responsibility are closely related. Authority was defined by Fayol as the right to give orders. Responsibility involves being accountable, and comes with authority. Whoever gets authority also has the responsibility.

**DISCIPLINE:** A successful organization requires the common effort of workers. Penalties should be applied judiciously to encourage this common effort.

**UNITY OF COMMAND:** Workers should receive orders from only one manager.

**UNITY OF DIRECTION:** The entire organization should be moving towards a common objective in a common direction.

**SUBORDINATION OF INDIVIDUAL INTERESTS TO THE GENERAL INTERESTS:** The interests of one person should not take priority over the interests of the organization as a whole.

**REMUNERATION:** Many variables, such as cost of living, supply of qualified personnel, general business conditions, and success of the business, should be considered in determining a worker's rate of pay.

**CENTRALIZATION:** Fayol defined centralization as lowering the importance of the subordinate role. Decentralization is increasing the importance.

**SCALAR CHAIN:** Authority should be divided from top level to low level as a part of chain. Each manager, from the first line supervisor to the president, possesses certain amounts of authority.

**ORDER:** For the sake of efficiency and coordination, all materials and people related to a specific kind of work should be treated as equally as possible.

**EQUITY:** All employees should be treated as equally as possible.

**STABILITY OF TENURE OF PERSONNEL:** Retaining productive employees should always be a high priority of management. Recruitment and Selection Costs, as well as increased product-reject rates are usually associated with hiring new workers.

**INITIATIVE:** Management should take steps to encourage worker initiative, which is defined as new or additional work activity undertaken through self-direction.

**ESPIRIT DE CORPS:** Management should encourage harmony and general good feelings among employees.

## 2.3 Functions of Management or Management Functions

Management consists of the functions given below. It is based on Henri Fayol's thinking on the functions of management.

1. **Planning:** generating plans of action for immediate, short term, medium term and long term periods.
2. **Organizing:** organizing the resources, particularly human resources, in the best possible manner.
3. **Staffing:** positioning right people right jobs at right time.
4. **Directing (includes leading, motivating, communicating and coordinating):** Communicate and coordinate with people to lead and enthuse them to work effectively together to achieve the plans of the organization.
5. **Controlling (includes review and monitoring):** evaluating the progress against the plans and making corrections either in plans or in execution.



Each of these functions is explained in some detail below:

### **1. Planning**

- Planning is decision making process.
- It is making decisions on future course of actions.
- Planning involves taking decisions on vision, mission, values, objectives, strategies and policies of an organization.
- Planning is done for immediate, short term, medium term and long term periods.
- It is a guideline for execution/implementation.
- It is a measure to check the effectiveness and efficiency of an organization.

### **2. Organizing**

- Organizing involves determination and grouping of the activities.
- Designing organization structures and departmentation based on this grouping.
- Defining the roles and responsibilities of the departments and of the job positions within these departments.
- Defining relationships between departments and job positions.
- Defining authorities for departments and job positions.

### **3. Staffing**

- It includes manpower or human resource planning.
- Staffing involves recruitment, selection, induction and positioning the people in the organization.
- Decisions on remuneration packages are part of staffing.
- Training, retraining, development, mentoring and counseling are important aspects of staffing.
- It also includes performance appraisals and designing and administering the motivational packages.

### **4. Directing**

- It is one of the most important functions of management to translate company's plans into execution.

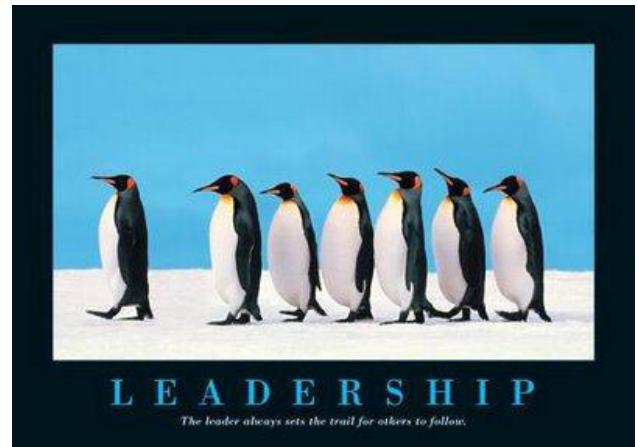
- It includes providing leadership to people so that they work willingly and enthusiastically.
- Directing people involves motivating them all the time to enthuse them to give their best.
- Communicating companies plans throughout the organization is an important directing activity.
- It also means coordinating various people and their activities.
- Directing aims at achieving the best not just out of an individual but achieving the best through the groups or teams of people through team building efforts.

### 5. Controlling

- It includes verifying the actual execution against the plans to ensure that execution is being done in accordance with the plans.
- It measures actual performance against the plans.
- It sets standards or norms of performance.
- It measures the effective and efficiency of execution against these standards and the plans.
- It periodically reviews, evaluates and monitors the performance.
- If the gaps are found between execution levels and the plans, controlling function involves suitable corrective actions to expedite the execution to match up with the plans or in certain circumstances deciding to make modifications in the plans.

## 2.4 Leadership Quality

- **Leadership** is an one's ability to (Lead, Guide, Influence and Command) the surrounding to sort our the aid and lead others to accomplishment of a common task.
- *Leader is the one whom people follow.*
- *Leader is the one who guides or directs others.*
- *Leader organizes a group of people to achieve a common goal.*



### 2.4.1 Responsibilities of Leadership

- Set and Achieve Business Goals
- Develop Innovation and Marketing skills
- Solve Problems and Make Decisions
- Set Priorities and Focus on Key Tasks
- Be a Role Model to Others
- Persuade, Inspire, and Motivate Others to Follow You
- Perform and Get Results

## 2.5 Motivation

**Motivation** is basis and a psychological feature that powers a person to act towards a desired goal. It can be considered a driving force which drive peoples towards a desired goal.

### 2.5.1 Types of Motivation ( प्रोत्साहन )

Motivation can be divided into two types:

- **Intrinsic (internal) motivation**
- **Extrinsic (external) motivation.**

#### Intrinsic Motivation:

- **Intrinsic motivation refers to motivation that comes from inside of the individual**, and exists within the individual rather than relying on external pressures or a desire for reward.



**Employees are likely to be intrinsically motivated if:**

- Appreciated for the skills they have to reach their desired goals.
- Friendly environment is provided.
- Advance facilities are provided in working area.
- Self-respect of the employee is secured



#### Extrinsic motivation:

- Extrinsic motivation comes from outside of the individual. Common extrinsic motivations are rewards (*for example money or promotion*) for showing the desired behavior.
- Competition exists in an extrinsic motivator because it encourages the performer to win and to beat others.
- A cheering crowd and the desire to win a trophy are also **extrinsic incentives** ( प्रोत्साहन ).



## 2.6 Decision Making

**Definition by Haynes & Massie** “Decision **making** is a process of selection from a set of alternative courses of action which is thought to fulfills the objective of the decision – problem more satisfactorily than others.”



## **2.6.1 Types of Managerial Decisions**

1. Organizational and Personal Decisions
2. Routine and Strategic Decisions
3. Programmed and Non programmed Decision
4. Policy and Operating Decision
5. Individual and Group decision

## **2.6.2 Decision making Process**

1. Defining the problem
2. Analyzing the problem
3. Developing alternative solutions
4. Evaluating the Alternatives
5. Selecting the best alternatives
6. Implementing the decision

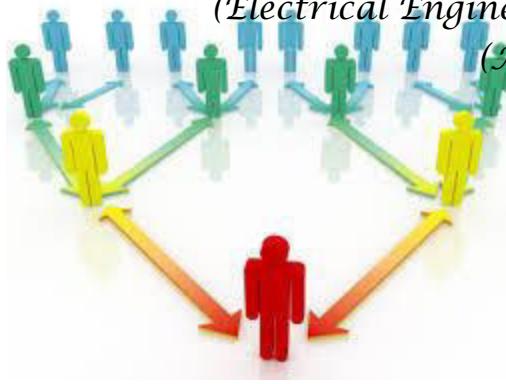
## **2.6.3 Factors involved in Decision Making**

**Tangible Factors** - Things which can be measured, Fixed cost, operating cost, profits, machine, etc

**Intangible factors** – Immeasurable elements. Eg. Employee morale, quality of labour relations, Consumer behavior, etc.

## **2.6.4 Problems of Decision Making**

1. Indecisiveness.
2. Time pressure.
3. Lack of Information.
4. Confusing symptoms with causes.
5. Failure to evaluate correctly.
6. Lack of follow through.
7. Key to success in Decision Making.



## Chapter-3

# Organizational Management

### 3.1 Organization (संगठन)

- A social unit of people that is structured and managed to meet a need or to pursue collective goals.
- All organizations have a management structure that determines relationships between the different activities and their by subdivides and assigns roles, responsibilities, and authority to carry out different tasks.

### 3.1 Definitions of Organization

- 1.) An Organization has been defined by E. F. L. Breach as "*A system of structural interpersonal relationships. In it, individuals are differentiated in terms of authority, status and roles with the result that personal interaction is prescribed, and anticipated reactions between individuals tend to occur while ambiguity and spontaneity are decreased*".
- 2.) According to Louis A. Allen, Organization is "*The process of identification and grouping the work to be performed, defining and delegating responsibility and authority and establishing relationships for the purpose of enabling people to work most effectively together in accomplishing objectives*".
- 3.) James Mooney defines organization as "*The form of every human association for attainment of a common purpose*".

### 3.1 Importance of Organization

1. Ensures optimum utilization of human resources
2. Facilitates coordination
3. Facilitates division of work
4. Ensures growth, expansion and diversification
5. Stimulates creativity
6. Facilitates administration
7. Determines optimum use of technology
8. Determines individual responsibility

### 3.1 Steps of Organization

- Identification and Division of Work.
- Departmentalization.
- Assignment of Duties.

- Establishing Reporting Relations.

### 3.4 Structure of Organization - Implies 4 Elements

- a. **Intentionally created:** In order to attain specific goals, Organization structure is deliberately created which converts resources (of management) into a productive enterprise.
- b. **Provides framework:** Organization structure usually takes the shape of a pyramid. Once established, it acts as a framework that can either constrain or facilitate managerial actions.
- c. **Use of Chart:** In an Organization, the structural relationships are normally shown through Organization charts. These charts indicate the intended final relationships at a given time.
- d. **Provides formal picture:** Organization structure may be horizontal or vertical. The horizontal aspects display basic departmentalization and vertical aspects display creation of hierarchy of superiors and subordinates.



### 3.5 Principles of organization

1. **Principle of unity of objectives:** Organizational goals, departmental goals, and individual goals must be clearly defined. All goals and objectives must have uniformity.
2. **Principle of specialization:** The term specialization is related to work and employees. When an employee takes special type of knowledge and skill in any area, it is known as specialization.
3. **Principle of coordination:** In an organization many equipment, tools are used. Coordination can be obtained by group effort that emphasize on unity of action.
4. **Principle of authority:** Authority is the kind of right and power through which it guides and directs the actions of others so that the organizational goals can be achieved. It is also related with decision making.
5. **Principle of responsibility:** Authority is necessary to perform the work. But with authority, obligation (बंधन) is also provided. So the obligation to perform the duties and task is known as responsibility. Responsibility can't be delegated. It can't be avoided.
6. **Principle of delegation (प्रतिनिधि मण्डल):** Process of transferring authority and creation of responsibility between superior and subordinates to accomplish a certain task is called delegation of authority.

**7. Principle of efficiency:** In enterprise different resources are used. These resources must be used in effective manner. When the organization fulfill the objectives with minimum cost, it is effective. Organization must always concentrate on efficiency.

**8. Principle of unity of command:** Subordinates should receive orders from single superior at a time and all subordinates should be accountable to that superior. More superior leads to confusion, delay and so on.

**9. Principle of span of control:** Unlimited subordinates can't be supervised by manager, this principle thus helps to determine numerical limit if subordinates to be supervised by a manager. This improves efficiency.

**10. Principle of balance:** The functional activities their establishment and other performances should be balanced properly. Authority, centralization, decentralization must be balanced equally. This is very challenging job but efficient management must keep it.

**11. Principle of communication:** Communication is the process of transformation of information from one person to another of different levels. Effective communication is important

**12. Principle of personal ability:** For successful organization, human resources is important. Employees must be capable. Able employees can perform higher. Mainly training and development programs must be encouraged to develop the skill in the employees

**13. Principle of flexibility:** Organizational structure must be flexible considering the environmental (market) condition. Sometimes, dramatically change may occur in the organization and in that condition, organization should be ready to accept the change

**14. Principle of simplicity:** This principles emphasizes the simplicity of organizational structure, the structure of organization should be simple with minimum number of levels do that its member understand duties and authorities.

### **3.6 Types of Organization**

- Organization structure is defined as "*The logical arrangement of task and the network of relationships and roles among the various positions established to carry out the activities necessary to achieve the predetermined objectives of business*".

**Internal Organization can be broadly classified into the following types/forms:**

1. Line Organization structure.
2. Functional Organization structure.
3. Line and staff Organization structure.

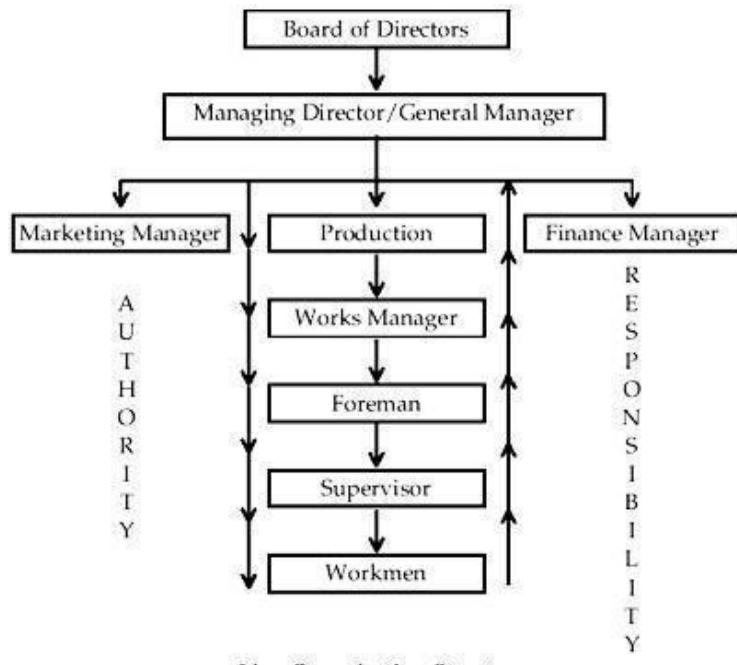
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### 3.6.1 Line Organization Structure

**Line Organization** (also called **Military/Scalar Organization**) is the oldest and the simplest form of internal Organization structure. It was first developed by the Roman army and later adopted by armies all over the world.

In the line Organization, **the line of authority moves directly from the top level to the lowest level in a step-by-step manner**. It is straight and vertical.

Thus **authority moves downward** and also step-by-step. The **responsibility moves in the upward direction**.



#### Advantages of Line Organization Structure

1. **Simplicity:** Line Organization structure is easy to understand and follow by superiors and subordinates. It is simple and clear as regards authority and accountability.
2. **Prompt decisions:** Line Organization facilitates prompt decision-making at all levels as the authority given is clear and complete.
3. **Discipline:** It brings discipline in the Organization due to unity of command, delegation of authority and direct accountability.
4. **Economical:** Line Organization is economical as experts are not appointed.
5. **Attraction to talented persons:** Line Organization brings out talented workers and develops in them quality of leadership.
6. Quick communication, high efficiency, flexibility and high employee morale are some more advantages of line Organization structure.

#### Limitations of Line Organization Structure

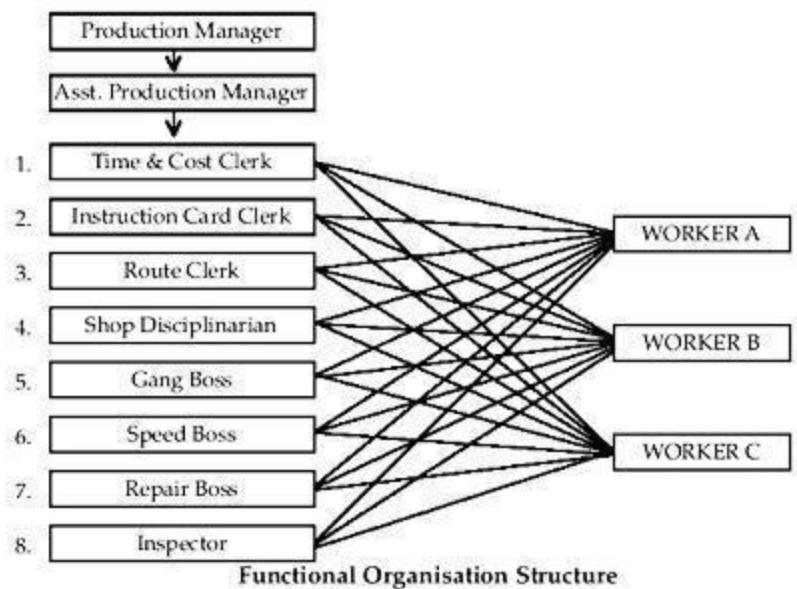
1. **Heavy burden on line executives:** The line executives are given too many duties and responsibilities.
2. **Non-availability of services of experts:** There is absence of skilled experts in line organization. Expert assistance is not available promptly when needed by line executives.
3. **Favoritism:** There is wide scope for favoritism and nepotism (**प्रियंका**) in the line organization.
4. **Too much dependence on limited executives:** In the line organization, all powers are concentrated in the hands of a few executives. Special difficulties arise when one executive is to be transferred/replaced/promoted.

5. **Rigidity:** There is rigidity in the working of line organization.
6. Delays in communication, limited freedom to employees and unsuitability to modern large business units are some more demerits of line Organization.

### **3.6.2 Functional Organization Structure**

*F.W.Taylor introduced the functional Organization structure.*

In the functional Organization, **the job of management is divided according to specialization**. As a result, **functional departments are created**.



### **Merits of Functional Organization Structure**

1. **Facilitates specialization:** Each boss has specialized knowledge of his functional area. He is in a better position to guide and help the workers.
2. **Benefits of large-scale operations:** In this Organization, one administrative unit manufactures all products. The available machinery, equipment and facilities are used fully for large-scale production.
3. **Facilitates effective coordination:** This is possible as one boss is in-charge of a particular function and he looks after all activities, which come within that function.
4. **Operational flexibility:** Necessary changes can be introduced easily to suit the needs of the situation without any adverse effect on the efficiency.
5. **Ensures effective supervision:** Due to specialization, they concentrate on the specific functional area and also keep effective supervision on their subordinates.

### **Demerits of Functional Organization Structure**

1. **Absence of unity of command:** Unity of command is absent as each worker gets orders and instructions from several bosses.
2. **Fixing responsibility is difficult:** In functional Organization, responsibility is difficult to fix on a specific person. This is because the responsibility itself is divided among many.

3. **Unsuitable to non-manufacturing activities:** Functional Organization can be introduced in the case of manufacturing activities. However, its application to non-manufacturing activities such as marketing, etc. has not been successful.
4. **Costly:** Functional Organization is costly, as more specialists are required to be appointed.
5. **Creates confusion among workers:** The authority is overlapping the responsibility. This confuses workers.
6. Conflicts among foremen, delays in decision-making and limited discipline within the departments are some more demerits of functional Organization.

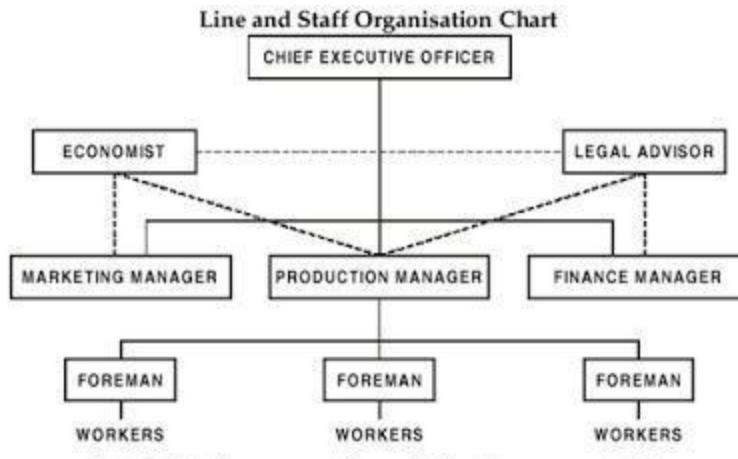
### 2.6.3 Line and Staff Organization Structure

In *the line and staff Organization*, *line executives and staff (specialists) are combined together*.

*Line executives "doers"* develops & executes Plans and Policies.

*Staff specialists "thinkers"* suggests for Plans and Policies.

This structure *avoids overlapping* of functions if managed properly.



According to Louis Allen,

"Line elements are those which have the responsibility and authority *for accomplishment of primary objectives*".

"Staff elements are those which have responsibility and authority *for providing advice and service to the line in attainment of objectives*".

### Merits of Line and Staff Organization

1. **Fewer burdens on executives:** Line executives get the suggestions of staff specialists. This raises overall efficiency and facilitates the growth and expansion of an enterprise.
2. **Services of experts available:** Highly qualified experts are appointed and they offer guidance to line executives.
3. **Sound decision-making:** The decisions are also taken in a democratic method i.e. in consultation with the experts.

4. **Limited tension on line managers:** The pressure of work of line bosses is brought down as they are concerned only with production management.
5. **Benefits of specialization:** The benefits of division of work and specialization are easily available.
6. **Training opportunities to employees:** Better opportunities of advancement are provided to workers. The scope for learning and training for promotions are available.

### **Demerits of Line and Staff Organization**

1. **Delay in decision-making:** The decisions of line managers are likely to be delayed due to this lengthy procedure.
2. **Buck passing among executives:** The line bosses are concerned with actual execution of work. If something goes wrong, the attempt is made to pass on the blame by one party to the other. Thus, there is shifting of responsibility or buck-passing.
3. **Conflicts between line and staff executives:** The line managers are generally not interested in the advice offered by experts. Secondly, specialists feel that the line bosses lack knowledge of new ideas. Such conflicts lead to bitterness.
4. **Costly Organization:** Line and staff Organization is a costly Organization as the line executives are supported by highly paid staff executives who are experts.
5. **Complicated operation:** This Organization is too complicated in actual operation because of dual authority and division of functions. The unity of command principle is violated.
6. **Internal discipline is affected adversely:** The internal discipline is likely to be affected adversely due to decentralization and division of subordinates.

### **2.6.4 Comparison b/w Line, Line & Staff and Functional:**

#### **For Line organization**

1. Line managers are generalists.
2. The line of authority is vertical as it follows the principle of scalar chain
3. There is strict discipline
4. It is not based upon planned specialization
5. There is unity of command
6. It is suitable for small scale operations
7. It is quite economical

#### **For Line and staff organization**

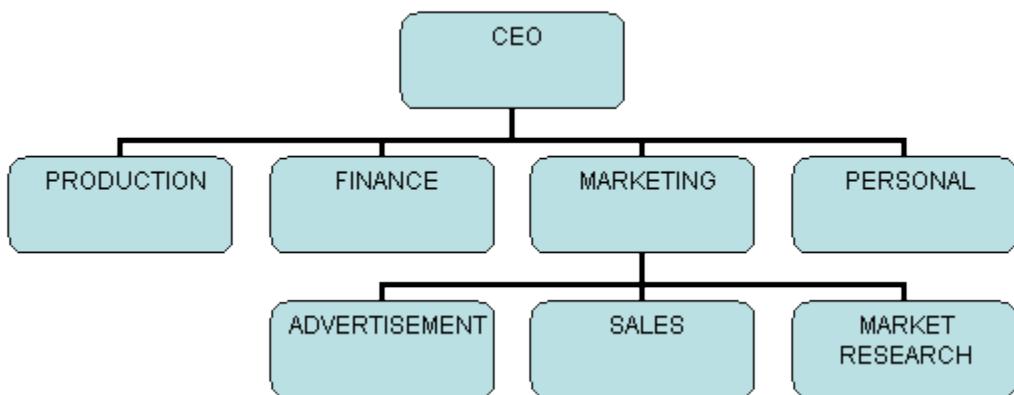
1. There are experts known as staff to advise and assist the line officials
2. Line authority and staff people with advisory authority
3. Loose discipline
4. It is based upon planned specialization
5. Unity of command observed to a great extent
6. Suitable for medium scale operations
7. Little costlier

#### **For Functional organization**

1. Functional managers are specialists in their respective areas
2. The line of authority is functional or diagonal. The functional manager has authority over the functions wherever it is performed.
3. Loose discipline
4. Based on high degree of specialization
5. Unity of command is not followed as each sub-ordinate gets instructions from his line boss and the functional bosses.
6. It is suitable for large scale operations where expert knowledge in certain fields is a must
7. Very costly

## **2.7 Departmentation**

- *The process of grouping of activities into units for the purpose of administration is called departmentation.*
- It can be defined "*As the process by which activities or functions of enterprise are grouped homogeneously into different groups.*"
- The administrative units are called *divisions, units or departments.*



#### **The followings are the basis of departmentation:**

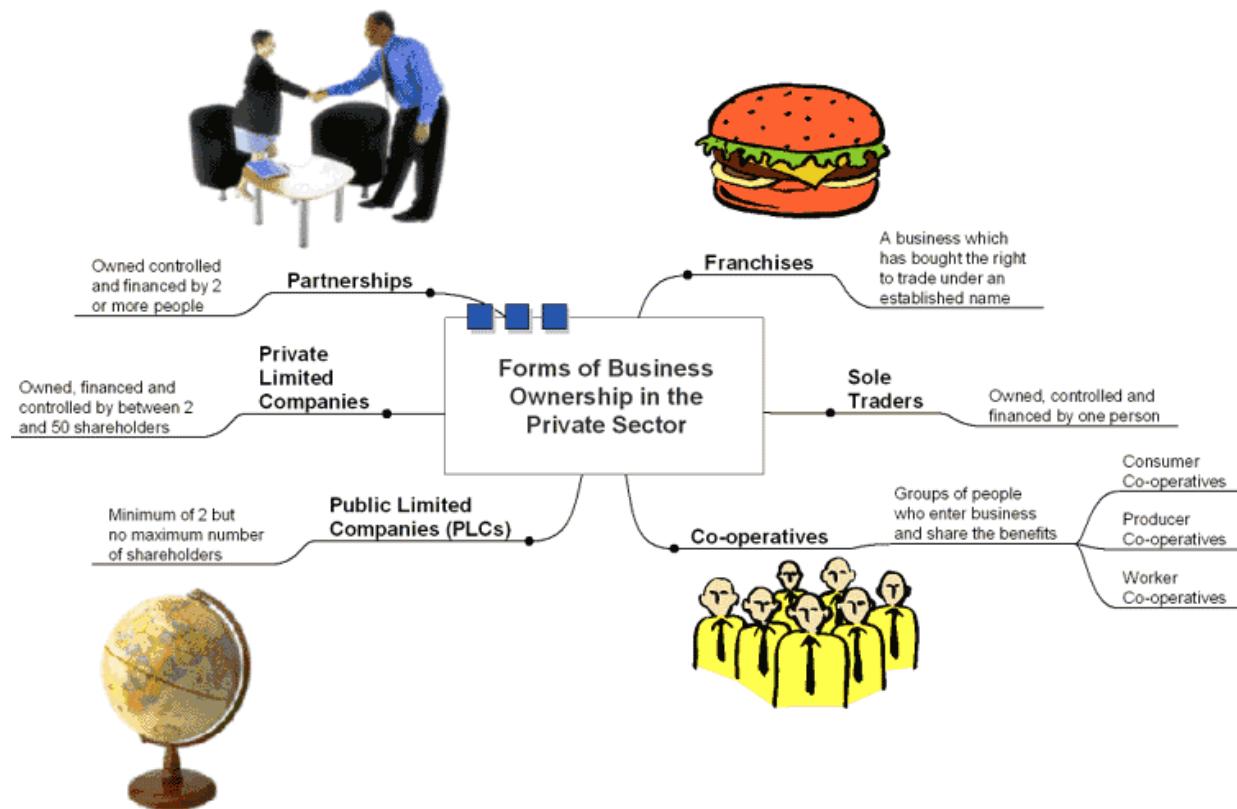
- (a) When departmentation is done on the *basis of functions*, the departments created are production, marketing, accounting, finance and personnel departments.
- (b) When departmentation is done on the *basis of territorial area*, the departments are known as eastern department, western department, northern and southern department.
- (c) Departmentation can be done on the *basis of customers*.
- (d) Departmentation can be done on the *basis of product* handled.

## 2.8 Types of Ownership Structures

The ownership of the organization is decided on the basis of capital. This is to be provided by Individual, Partners, Cooperation and Govt.

The most common ways to organize a business:

- Sole Proprietorship
- Partnership
- Limited partnership
- Limited Liability Company (LLC) or Private Sector
- Co-operatives.
- Public Limited or Govt. Sector



### 2.8.1 Sole Proprietorships and Partnerships

For many new businesses, the best initial ownership structure is either a sole proprietorship or -- if more than one owner is involved -- a partnership.

### Sole Proprietorships

- A **sole proprietorship** is a one-person business that is **not registered** with the state like a limited liability company (LLC) or corporation.
- The business and the owner are one and the same. This means the owner of the business responsible for any business-related issues, such as profits, debts or court judgments.

*E.g.( Camera Shops, Garages, Stores etc.)*



### 2.8.2 Partnerships

- Similarly, a **partnership** is simply a business owned by two or more people that haven't filed papers to become a corporation or a limited liability company (LLC).
- The partnership's owners are each personally liable for the entire amount of any business profits, debts and claims.

*E.g.( Maruti- Suzuki, Bajaj- Dtsi etc.)*



### Limited Partnerships

- Limited partnerships are usually created by one person or company (the "general partner"), who will make investments from others (the "limited partners").
- The **general partner controls day-to-day operations and is personally liable for business debts** (unless the general partner is a corporation or an LLC).
- **Limited partners have minimal control** over daily business decisions or operations and, in return, they are not personally liable for business debts or claims.



*E.g. (Reliance, Tata etc.)*

### 2.8.3 Corporations (महामंडळ)

- **Corporation** is an independent legal and tax entity (**आस्तित्व**), separate from the people who own, control and manage it. Because of this separate status, **the owners of a corporation are not responsible for corporate profits & debts** -- the corporation itself bears these issues.



*E.g. (ST Maharashtra state travels corporation, NPCIL nuclear power corporation, NHPC national hydro power corporation etc.)*



The Saraswat Co-Operative Bank Ltd.  
 (A Scheduled Bank)

## 2.8.4 Cooperatives

- Some people dream of forming a business of true equals -- an organization owned and operated democratically by its members. These grassroots business organizers often refer to their businesses as a "group," "collective," or "co-op".
- For example, a consumer co-op could be formed to run a food store, a bookstore, or any other retail business. Or a workers' co-op could be created to manufacture and sell arts and crafts.

E.g. (Co-operative Banks, Society, Clubs etc.)

## 2.8.5 Public Limited or Govt. Sector

- It is the sector which is completely owned by the Govt. of State or Central. The main motive of the sector is to produce and supply goods on public requirement.
- The govt. is responsible for all the profits and loss of the company, it has to pay all the debts by its own govt. fund.



E.g. (MSEB Maharashtra electricity board, SBI state bank of India, BHEL bharat heavy electrical ltd etc.)

## 2.9 Distinction between a *Public company* and *Private company*



	<b>Public</b>	<b>Private</b>
<b>Minimum number of members</b>	minimum number of person required to form a public company is seven	private company their number is only two
<b>Maximum number of members</b>	There is no limit on the maximum number of member of a public company	private company cannot have more than fifty members excluding past and present employees.

<b>Commencement of Business</b>	public company shall not commence its business immediately unless it has been granted the certificate of commencement of business	A private company can commence its business as soon as it is incorporated
<b>Transfer of shares</b>	There is no restriction on the transfer of share In the case of public company	restrict the right of members to transfer the share
<b>Number of Directors</b>	A public company must have at least three directors	private company may have two directors
<b>appointment of Directors</b>	Appointed by govt. itself by signing contract or MOU	Appointed by company without any restriction
<b>Managerial Remuneration</b>	public company cannot exceed 11% of net profits or minimum of Rs. 50, 000 can be paid	These restrictions do not apply to a private company.
<b>Name</b>	public company has to use only the word 'Limited' at the end	private company has to use words 'private limited' at the end



## Chapter- 4 Industrial Safety and Legislative Acts

### 4.1 Safety Management

- Safety management system (SMS) refers to a comprehensive business management system designed to manage safety elements in the workplace.  
*Or*
- A SMS provides a systematic way to identify hazards and control risks while maintaining assurance that these risk controls are effective.

#### 4.1.1 Most Common Causes of Workplace Accidents

- Shortcuts
- Overconfidence
- Poor, or Lack of Housekeeping
- Starting a Task Before Getting All Necessary Information
- Neglecting Safety Procedures
- Mental Distractions
- Lack of Preparation

#### 4.1.2 Types of Accidents

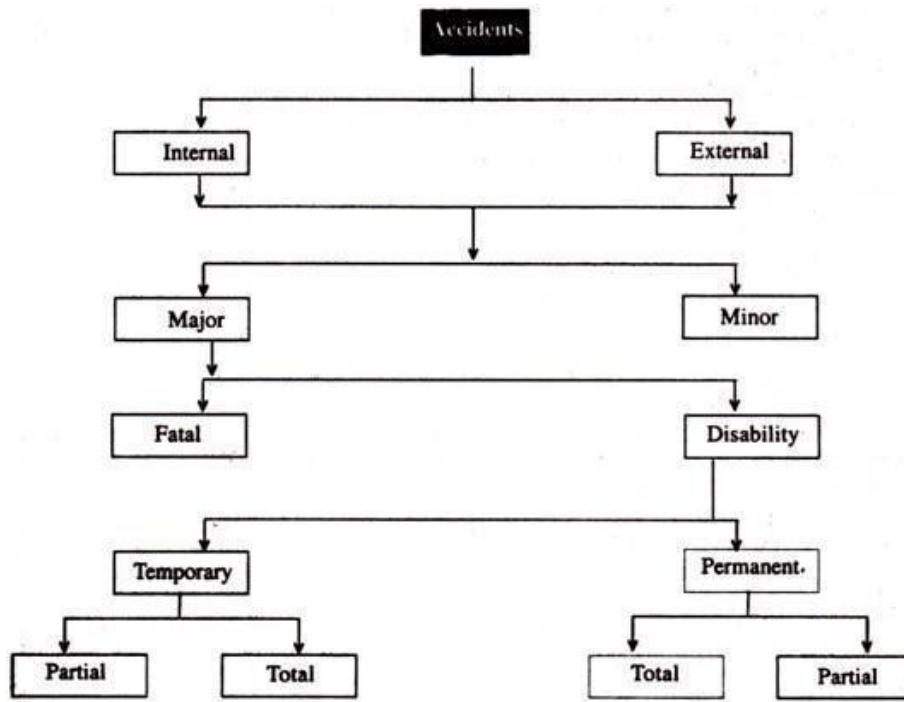
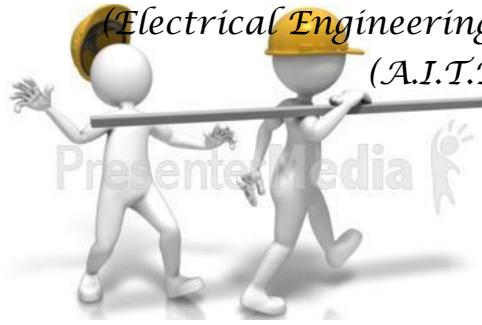


Fig. 20.1: Types of Accidents

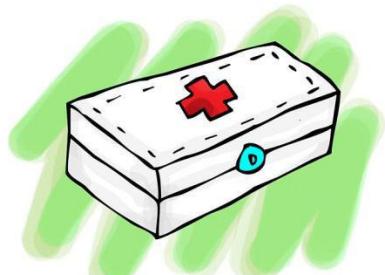


#### 4.1.2 Preventive Measures of Accidents

1. Always be alert on the job
2. Wear the required uniform
3. Listen and actively participate during emergency drills
4. Always ask your supervisor about the possible risks of doing a certain task
5. Never take a high-risk job for which you have not been trained for
6. Always follow the safety program of your workplace
7. Always be on the lookout for possible cause of accidents and then report it to the management
8. Owners of a company should always post signs or rules that should be observed by their employees
9. Formation of an emergency team among the workers
10. Never risk the health and safety of the employees

#### 4.1.3 Safety Procedure of Accidents

- Be prepared for a fire in your workplace.
- Consider investing in first-aid training or, at the very least, a first aid kit.
- Create incident reports after each workplace accident.
- Make sure your workplace entrances and exits are fully operational and easily accessible.
- Clearly mark potential safety concerns with the proper signage and instructions.



## 4.2 Industrial Legislative (विधान) Act and Regulation

In order to safeguard the interest of the industrial workers, a number of industrial act and regulation have been passed by the govt.

### Different Industrial Acts:

- Indian Factory Act, 1881( amended in 1948)
- Worker's Compensation Act, 1924
- Minimum Wages Act, 1948
- Industrial Dispute Act, 1947
- ESI( Employee's State Insurance) Act, 1948

### 4.8.1 Indian Factory Act, 1948

- The main objective of the act was to make strong the laws of regulating labour in the factories in India.
- This factory act is now applicable to all factories in India which employ 10 or more number of workers and which uses any type of power



### Main Features of Act

- **Approving, Licensing & Registration:** Plans and specification should be approved by factory inspector. Factory should be registered and license fee should be paid
- **Health Provision:** Every factory should be clean and tidy. They should be proper ventilated for fresh air. Company surrounding should maintain humid temperature naturally or artificially. Sufficient lighting, drinking water, urinal or latrine must be available.
- **Safety Provisions:** Every part of the machines in the company should be properly guarded and should be proper standard. Emergency first aid and ambulance should be available. Special protective equipment's (gloves, goggles, and coat) should be provided to workers in dangerous field. Every factory should have immediate evacuation provisions under emergency condition.
- **Welfare Provisions:** Suitable facilities of staying, rest room, sitting, canteen, laundry should be provided by the company. Welfare should be appointed in every factory with more than 500 workers.
- **Hours of Work:** No workers should be allowed to work more than 48 hours in a week and not more than 9 hours in a day. If allowed he should be entitled to extra wages. No women should be allowed to work in factory after **07.00 pm**.
- **Employment of young persons:** No persons below the age of 14 shall be employed in the factory. Child above 14 with fitness certificate should be employed.
- **Annual Leave:** Each employee should be given 30 days (adult) and 40 days (child). After completing 250 days in a year, an employee is entitled with EL (earned leave) for which he/her will be paid for the leaves.

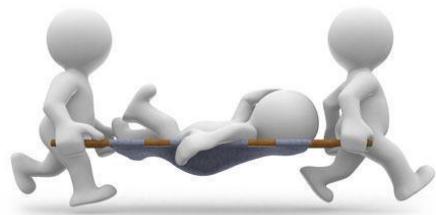


## 4.8.2 Workmen's Compensation Act

- It is the act which provides the payment by certain classes of employer to their workmen as compensation for injury by accident.

### Features of the act:

- **Employer's Liability:** The workmen injured in the factory during his employment, he/she is liable for the compensation.
- **Amount of Compensation:** The amount depends upon the kind of injury like (death, permanent disable, partial disable, temporary disable).
- **Notice of Accident:** The employer should give the prior intimation or notice of accident through some responsible person before claiming for the benefit.
- **Medical Examination:** He/she should bring the medical certificate of his/her injury for getting the benefit.
- **Distribution of Compensation:** No compensation should be released to the victim without the Factory Commissioner. If made it will not be considered.
- **Commissioner:** He is the gazette officer of govt. appointed as Commissioner for the specific area. He has full power of Civil Court.



## 4.8.3 Minimum Wages Act

- An Act to provide for fixing minimum rates of wages in certain employments.
- An Act to provide for certain benefits to employees in case of sickness, maternity and "employment injury" and to make provision for certain other matters.

### Features of Act:



- A basic rate of wages with the cost of living allowance.
- It provides the cash value of the concessions in respect of supplies of essential commodities at concessional rates. i.e., Mess Allowance, Laundry Allowance, Hospital Allowance etc.
- The act empowers the appropriate government to fix the number of hours of work per day.
- To provide for a weekly holiday and the payment of overtime wages of which minimum rates of wages have been fixed under the act.
- The act lays down for appointment of inspectors and other authorities to hear and decide claims arising out of payment of wages at less than the minimum rates of wages or remuneration for days of rest of work done on such days or of overtime wages.
- The act provides the procedure for dealing with complaints arising out of the violation of the provisions of the act and for imposing penalties for offences under the act.

**1948:** The Minimum Wages Act was eventually passed and was effective from 15 March with minimum wages of Rs. 38/day. Under the act a tripartite committee "The Tripartite Committee of Fair Wage" was appointed that set definitions and guidelines for formulating a wage structure in India.

**1988:** Labour Minister's Conference recommend the necessity of an allowance that safeguards wages against inflation, called Variable Dearness Allowance(VDA)

**1994:** The 9th Centre of Indian Trade Unions conference along with insisting a minimum wage floor of Rs. 78.50/day.

**1996:** Government fixed the national minimum wage floor at INR 35/day as per the recommendations of NCRL.

**2009:** The Central government de-linked MGNREGA's (Mahatma Gandhi National Rural Employment Guarantee Act) respective states' minimum wages were now fixed at a uniform wage rate of Rs. 100/- under the scheme.

**2015:** From July 1, 2015 the National Floor Level of Minimum Wage was raised to Rs 160 per day.

**2015:** On September 1, 2015 labourers in unorganised sector supported to one-day nationwide general strike called by central trade unions (CTUs). Later than **Shri Bandaru Dattatreya, the Minister of State for Labour and Employment**, elaborated efforts of the Government to address the issues and concerns of the Trade Unions for the welfare of workers.

Note: If the norms are implemented then the minimum wage would be not less than Rs 273/day which is currently Rs 160 per day.

#### 4.8.4 Industrial Dispute Act

- This act provides various mechanism to settle Industrial disputes so as to avoid (strikes and lockouts)

##### Features of the act:

- **Work's Committee:** Committee is must in every factory employing more than 100 workers. This committee promotes good relations and unity between employer (Boss) and employee (worker).
- **Conciliation Officer:** These officers are appointed by state govt. to settle disputes of companies.
- **Board of Conciliation:** It consists of board by the state govt. with independent chairmen and members for settling disputes.
- **Court of Enquiry:** It consists of state govt. representative to enquire the cause of disputes.
- **Labour Court:** State govt. has to appoint one person with judicial experience to adjudicate (**निर्णय**) the disputes.



- **Tribunal** (**व्यायाधिकरण**) : The state govt. has to appoint tribunal at the level of High Court Judge to look on the matters like (Wages, Allowance, Work Hours, Bonus & Fund, Grades, Discipline, Rules etc.).
- **National Tribunal:** National tribunal is appointed by the central govt. at level of High Court judge for the dispute of national importance.

#### 4.8.5 Employees State Insurance

- This act is enacted mainly to provide certain advantages to the employees, whenever he/she is not able to report on duty due (illness, injury, accidents etc.)



##### Feature of Act:

- **Sickness Benefit:** If the person is not fit for duty for more than 50 days, he/she will be given the benefit.
- **Maternity Benefit:** Periodical payment to be made to the women for her maternity period.
- **Disablement Benefit:** This benefit is given to the persons who are injured and are suffering from temporary or permanent disablement.
- **Dependent Benefit:** In case the person in the company accidentally dies, then the benefit will be given to the family members who were dependent on victim.
- **Medical Benefit:** Medical care and treatment should provide free of charges to the injured employees.
- **Funeral Benefit:** Funeral expenditure should be given by the company for the family of eldest surviving member on his recent death.

## Chapter- 5

# Financial Management

### 5.1 Introduction

**Financial Management means planning, organizing, directing and controlling** the financial activities such as **procurement and utilization of funds of the enterprise**. It means applying general management principles to financial resources of the enterprise.



#### 5.1.1 Objectives of Financial Management

The financial management is generally concerned with procurement, allocation and control of financial resources of a concern. The objectives can be-

1. To ensure regular and adequate supply of funds to the concern.
2. To ensure adequate returns to the shareholders.
3. To ensure optimum funds utilization
4. To ensure safety on investment.
5. To plan a sound capital structure.
6. To maximize the profit in long run.



#### 5.1.2 Functions of Financial Management



**Estimation (अनुमान) of capital requirements:** A finance manager has to make estimation with regards to capital requirements of the company.

**Determination of capital composition:** Once the estimation has been made, the capital structure have to be decided. i.e., **How much capital should be utilized and Where.**

**Choice of sources of funds:** For additional funds to be procured, a company has many choices like-

- a) Issue of shares and debentures
- b) Loans to be taken from banks and financial institutions
- c) Public deposits to be drawn like in form of bonds.

**Investment of funds:** The finance manager has to decide to allocate funds into profitable ventures so that there is safety on investment and regular returns is possible.

**Disposal of surplus (बचत):** The net profits decision has to be made by the finance manager. This can be done in two ways:

- a) **Dividend declaration** - It includes identifying the rate of dividends and other benefits like bonus.
- b) **Retained profits** - The volume has to be decided which will depend upon expansion, innovational, diversification plans of the company.

**Management of cash:** Finance manager has to make decisions with regards to cash management. Cash is required for many purposes like payment of wages and salaries, payment of electricity and water bills, payment to creditors, meeting current liabilities, maintenance of enough stock, purchase of raw materials, etc.

**Financial controls:** The finance manager has not only to plan, procure and utilize the funds ***but he also has to exercise control over finances***. This can be done through many techniques ***like ratio analysis, financial forecasting, cost and profit control***, etc.

## 5.2 Capital Structure

- **The money that is used to run a business is called capital.**
- It is tracked according to how it is used, and different kinds of investments produce different types of benefits for a company.
- The way money is spent on a business's needs determines whether it is a fixed capital investment or a working capital investment.

### 5.2.1 Types of Capital

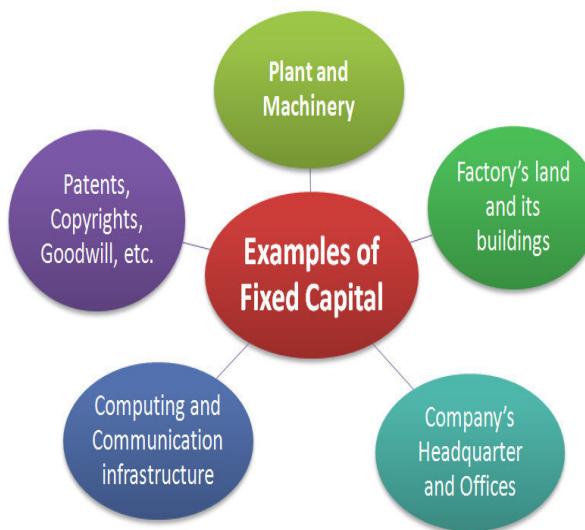
The forms, **classification** or types of capital are:-

1. **Fixed capital:** It refers to durable capital goods which are used in production again and again till they wear out.  
*E.g., Machinery, tools, means of transport, factory building, etc are fixed capital.*
2. **Working capital:** Working capital or variable capital is referred to the single use goods like raw materials. Money spent on them is fully recovered when goods made out of them are sold in the market.  
*(E.g., buy inventory, pay bills, wages, salaries, etc.)*



### 5.2.2 Comparison of Fixed and Working Capital

Fixed Capitals	Working Capitals
Fixed capital is used to buy Land, Building, Equipment's, Machinery, Tools and Furniture, etc.	It is used to carry out day to day operations.
It consists of <b>land building, tools, machines</b> etc.	Working capital consists of <b>cash, marketable securities, accounts receivable, stock</b> .
This includes the long term decisions.	This includes short term decisions.
This is mainly used for operational activities.	Working capital is required for trading activities.



## 5.5 Sources of Finance

### ACCORDING TO TIME-PERIOD:

Sources of financing a business are classified based on the time period are commonly classified into following three:

**Long Term Sources of Finance:** Long term financing means capital requirements for a period of more than **5 years to 10, 15, 20 years** or may be more depending on other factors.

Long term financing sources can be in form of any of them:

- Share Capital or Equity Shares
- Preference Capital or Preference Shares
- Retained Earnings or Internal Accruals
- Debenture / Bonds
- Term Loans from Financial Institutes, Government, and Commercial Banks
- Venture Funding
- Asset Securitization
- International Financing by way of Euro Issue, Foreign Currency Loans, ADR, GDR etc.



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**Medium Term Sources of Finance:** Medium term financing means financing for a **period between 3 to 5 years**. Medium term financing is used generally for two reasons.

Medium term financing sources can in the form of one of them:

- Preference Capital or Preference Shares
- Debenture (कर्जराखे)/ Bonds
- Medium Term Loans from
  - Financial Institutes
  - Government, and
  - Commercial Banks
- Lease Finance
- Hire Purchase Finance

**Short Term Sources of Finance:** Short term financing means financing for period of less than 1 year. Short term financing is also named as working capital financing. Short term finances are available in the form of:

- Trade Credit
- Short Term Loans like Working Capital Loans from Commercial Banks
- Fixed Deposits for a period of 1 year or less
- Advances received from customers
- Creditors
- Payables
- Factoring Services
- Bill Discounting etc.



### 5.5.1 Difference between a Debenture and Share Holders

<b>Debentures</b>	<b>Share Holders</b>
A person having the debentures is called debenture holder	Person holding the shares is called shareholder.
Debenture holder is a creditor of the company and cannot take part in the management of the company	Shareholder is the owner of the company
Debenture holders will get interest on debentures and will be paid in all circumstances, whether there is profit or loss will not affect the payment of interest on debentures.	Shareholder will get a portion of the profits called dividend which is dependent on the profits of the company.
Debentures can be converted into shares	Shares cannot be converted into debentures
No restriction on issue of debentures at a discount	Shares at discount can be issued only after observing certain legal formalities
There can be mortgage debentures i.e. assets of the company can be mortgaged in favor of debenture holders.	There cannot mortgage shares

### 5.3 BUDGETS

**The budget consists of a summary statement of revenue and expenditure.** The initial and amended budgets provide information on the approved budget for one financial year.



#### 5.3.1 The Objectives of Budgets

Budgets are intended to facilitate the managerial functions of planning and control as well as the organizational pattern and other objectives as stated in the following:

1. To direct some of management's attention from the present to the future planning,
2. To force managers to analyze the companies activities critically and creatively.
3. To enable management to anticipate problems or opportunities in time to deal with them effectively.
4. To reinforce the managers motivation to work to achieve the company's goals and objectives.
5. To give managers a continuing reminder of the actions they have decided on.
6. To provide a reference point for control reporting and evaluating performance.
7. Budgets promote communication and coordination of activities.

#### 5.3.2 Different Types of Budgets

**Static or Fixed Budget:**

- A static or fixed budget contains elements where expenditures remain unchanged with variations to sales levels.

**Flexible or Variable Budget:**

- Flexible or variable budget reflects and combats the changes in expenditure as a result of changes in volume of production and revenues.

### Main or Master or Functional Budget:

A master budget is a projection of how management expects to run business over the budget period. Most master budgets include interrelated budgets like (**Sales, Production, Capital Expenditure, Purchase, Labour**).

### Materials or Production Budget:

- This budget also known as operations budget includes budgeting for raw material required for production, spare parts for maintenance, labour time, machine time, energy consumption etc.

#### Production Budget

For the Year Ended December 31, 20B

	<i>Quarter</i>				Year as a Whole
	1	2	3	4	
Planned sales (Schedule 1)	1,000	1,800	2,000	1,200	6,000
Desired ending inventory*	180	200	120	300†	300
Total needs	1,180	2,000	2,120	1,500	6,300
Less: Beginning inventory	<u>200‡</u>	<u>180‡</u>	<u>200</u>	<u>120</u>	<u>200</u>
Units to be produced	<u>980</u>	<u>1,820</u>	<u>1,920</u>	<u>1,380</u>	<u>6,100</u>

\*10 percent of the next quarter's sales (for example, 180 = 10% × 1,800).

†Given.

‡The same as the previous quarter's ending inventory.

### Direct Labor Budget:

- The direct labor budget is used to calculate the number of labor hours that will be needed to produce the units itemized in the production budget.

Spreadsheet											
B5		fx	=Production!B9								
	A	B	C	D	E	F					
1	Shehadeh Movie Screens										
2	Direct Labor Budget										
3	For the Year Ending December 31, 20X9					Notes					
4			First Quarter	Second Quarter	Third Quarter	Fourth Quarter					
5	Scheduled production		1,950	1,875	2,850	2,500					
6	X Direct labor hours per unit		3	3	3	3					
7	Total direct labor hours		5,850	5,625	8,550	7,500					
8	X Cost per direct labor hour		\$ 14.00	\$ 14.00	\$ 14.00	\$ 14.00					
9	Cost of direct labor		<u>\$81,900</u>	<u>\$78,750</u>	<u>\$119,700</u>	<u>\$105,000</u>					
10											
	Sales	Production	Materials	Labor	Factory Overhead	Finished Goods	SG&A	Cash	Income	<	>

### **Profit & Loss (P& L) Balance-sheet:**

- The profit and loss (P&L) account summarizes a business' **trading transactions** - income, sales and expenditure - and the resulting profit or loss for a given period.
- It doesn't show day-to-day transactions or the current profitability of the business.

#### **Profit and loss account for the year ended 30 April 2011**

	<u>Notes</u>	<u>2011</u> <u>£</u>	<u>2010</u> <u>£</u>
<b>Turnover</b>	2	<b>384,821</b>	240,350
Cost of sales		<b>89,965</b>	44,942
Gross profit		<b>294,856</b>	195,408
Administrative expenses		<b>19,829</b>	36,628
		<b>19,829</b>	36,628
<b>Operating profit</b>	3	<b>275,027</b>	158,780
Other interest receivable and similar income		-	103
<b>Profit on ordinary activities before taxation</b>		<b>275,027</b>	158,883
Taxation on profit on ordinary activities	5	<b>57,059</b>	33,267
<b>Profit for the financial year</b>		<b>217,968</b>	125,616

## **5.4 Introduction to Taxes**

Tax is imposition financial charge upon a taxpayer by a state or other the functional equivalent of the state.



### **5.4.1 Types of Taxes**

*There are two types of Taxes in India –,*

**1. Direct Taxes :** The Taxes whose burden falls directly on the Tax payers are the Direct Taxes *like Income Tax, Wealth Tax etc.,*

**2. Indirect Taxes :** The taxes in which the burden is passed on to a third party are called Indirect Taxes like *Service Tax, VAT etc.,*

**Income Tax:** Income Tax Act, 1961 imposes tax on the income of the individuals or Hindu undivided families or firms or co-operative societies (other than companies) and trusts (identified as bodies of individuals associations of persons) or every artificial juridical person by the state govt.

**Customs Duty:** The Customs Act was formulated in 1962 to prevent illegal imports and exports of goods. It is the tax which is to be paid during import and export of goods.

**Central Excise Duty:** The Central Government levies (साइटने) excise duty under the Central Excise Act, 1944 and the Central Excise Tariff Act, 1985. Central excise duty is tax which is charged on such excisable goods that are manufactured in India and are meant for domestic consumption.

**Service Tax:** The Service Tax is tax levied to the service provider, on the gross or aggregate amount charged by the service provider on the receiver. The service providers in India except those in the state of Jammu and Kashmir are required to pay a Service Tax under the provisions of the Finance Act of 1994.

**Sales Tax:** Sales Tax in India is a form of tax that is imposed by the Government on the sale or purchase of a particular commodity within the country. Sales Tax is imposed under both, Central Government (Central Sales Tax) and State Government (Sales Tax) Legislation.

**Value Added Tax (VAT):** The practice of VAT executed by State Governments is applied on each stage of sale, with a particular apparatus of credit for the input VAT paid.



## Chapter-6

# Inventory Management

### 6.1 Material or Inventory Management

In dictionary meaning of inventory is a “*detailed list of goods, furniture etc.*”

In a manufacturing organization, *the stock of finished goods, stock of partly finished goods, raw materials and stores. The collective name of these entire items is ‘inventory’.*

#### Finished Goods:

- Goods being manufactured for sale by the business which are ready for sale.

#### Semi-Finished Goods:

- Goods being in process of manufacturing and are not ready for sale by the business.

#### Raw Materials:

- These are the materials which are used for manufacturing of finished goods that are to be marketed by company.

### 6.3 Problems faced by management

1. To maintain a large size inventories for efficient and smooth production and sales operation.
2. To maintain only a minimum possible inventory because of inventory holding cost and opportunity cost of funds invested in inventory.
3. Control investment in inventories and keep it at the optimum level.



### 6.4 Functions of Inventory Management

The functions of the **inventory management** are as follows:

1. *The manager of the inventory has to take great care of time.*
2. *Inventory management is also fed with the cost of all the raw items and their subsequent costs in finished form.*

Inventory management makes sure that the price of an



item does not get too high after including all the taxes.

3. *Inventory management is also responsible for observing the availability of all raw materials which to be used in completing all the orders.* Managers have to make sure that all material is available so that all orders could get complete in time.
4. *It is also a duty of an inventory manager that he keeps account of all raw materials* and makes order for their reach in time so that the processing operation does not come to halt.
5. *Inventory management is also liable for keeping all records of the ready products which has to be shipped.* The items for shipping should not be shorter than demanded by the clients. If it happens, **inventory management** can wreck the reputation of the organization.

## 6.5 Inventory Control Techniques

*Control of inventory is exercised by introducing various measures of inventory control, such as ABC analysis*

### 6.5.1 ABC Analysis of Inventories

*ABC analysis* is an **inventory categorization method** which consists in dividing items into three categories, A, B and C: A being the most valuable items, C being the least valuable ones. This method aims to draw managers' attention on **the critical few** (A-items) and not on **the trivial many** (C-items).

**It may also be clear with the help of the following examples:**

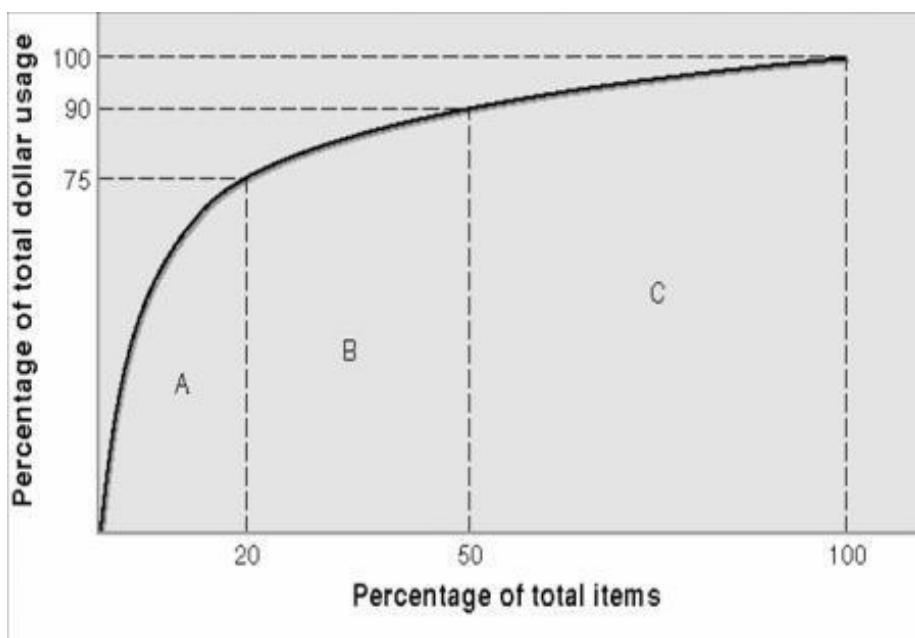
“A” Category – 5% to 10% of the items represent 70% to 75% of the money value.

“B” Category – 15% to 20% of the items represent 15% to 20% of the money.

“C” Category – The remaining number of the items represent 5% to 10% of the money value.

**The annual consumption value is calculated with the formula:**

$$= (\text{Annual demand}) \times (\text{item cost per unit})$$



**The following steps will explain to you the classification of items into A, B and C categories:**

1. Find out the unit cost and the usage of each material over a given period.
2. Multiply the unit cost by the estimated annual usage to obtain the net value.
3. List out all the items and arrange them in the descending value. (Annual Value)
4. Accumulate value and add up number of items and calculate percentage on total inventory in value and in number.
5. Draw a curve of percentage items and percentage value.
6. Mark off from the curve the rational limits of A, B and C categories.

#### **Advantages of ABC Analysis:**

- Classification of items.
- Variation of prices can be done and identified easily.
- Emergency needs can be fulfilled.
- Visualization of stock levels can be done.
- Record maintaining is easy.
- Inventory analysis can be done easily.

#### **Dis-advantages of ABC Analysis:**

- It has to be done in standard way.
- Lowest cost items get no importance.
- Coding of item should be done properly otherwise ABC analysis fail.
- Cost factors in analysis may not match with the market dynamics.

## 6.6 ECONOMIC ORDER QUANTITY (EOQ) MODEL

**The economic order quantity (EOQ) is the order quantity that minimizes total holding and ordering costs for the year.** Even if all the assumptions don't hold exactly, the EOQ gives us a good indication of whether or not current order quantities are reasonable.

Or

**The Economic Order Quantity (EOQ) is the number of units that a company should add to inventory with each order to minimize the total costs of inventory—such as holding costs, order costs, and shortage costs.**

**Following is the formula for the economic order quantity (EOQ) model:**

$$Q^* = \sqrt{\frac{2DS}{H}}$$

Where Q = optimal order quantity

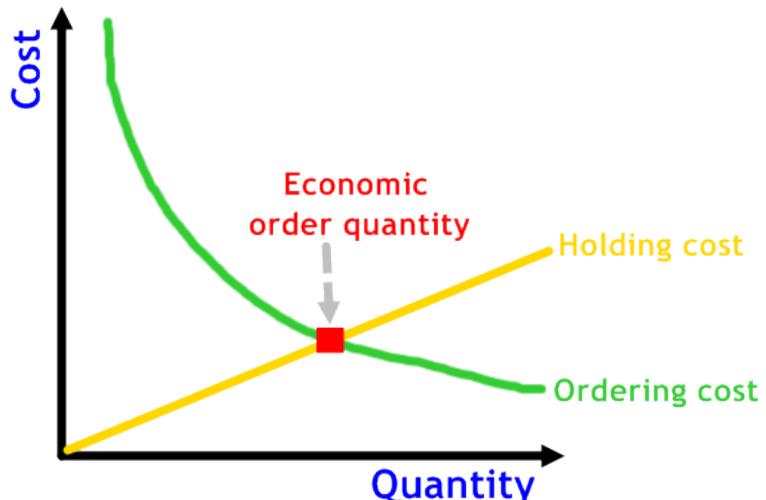
D = units of annual demand

S = cost incurred to place a single order or setup

H = carrying cost per unit

**Total cost = purchase cost + ordering cost + holding cost**

$$\sqrt{\frac{2 * 16,000 * \$50}{\$2.50}} = 800 \text{ units p}$$



### Assumption of the EOQ model

Following are the underlying assumptions for the EOQ model. Without these assumptions, the EOQ model cannot work to its optimal potential.

- The cost of the ordering remains constant.
- The demand rate for the year is known and evenly spread throughout the year.
- The lead time is not fluctuating (lead time is the latency time it takes a process to initiate and complete).
- No cash or settlement discounts are available, and the purchase price is constant for every item.

- The optimal plan is calculated for only one product.
- There is no delay in the replenishment of the stock, and the order is delivered in the quantity that was demanded, i.e. in whole batch.

### **Advantages of ordering Economic order quantity of inventory:**

- Constant or uniform demand: The demand or usage is even through-out the period
- Known demand or usage: Demand or usage for a given period is known i.e. deterministic
- Constant unit price: Per unit price of material does not change and is constant irrespective of the order size
- Constant Carrying Costs: The cost of carrying is a fixed percentage of the average value of inventory
- Constant ordering cost: Cost per order is constant whatever be the size of the order

### **Limitations of the economic order quantity model:**

- It is necessary for the application of EOQ order that the demands remain constant throughout the year, which is not possible.
- EOQ works only when the sufficient order quantity is placed, not works with low quantity order.



### **6.7 Purchase Procedure**

- In every big organization, it has its own purchase department to handle all the functions related to purchase of raw materials or any other requirements.
- It procures or stores the materials, machinery and services required for production and maintenance.

### **Objectives of Purchase Department:**

- To maintain uninterrupted flow of materials to support the development schedules.
- To procure materials economically at a cost consistent with the quality and service required. However, generally all purchases may be attempted at the lowest cost.
- To develop and maintain good buyer-seller relationship.
- To maintain Organization reputation and credibility in the market by fair dealings and prompt payments.



### Steps in Purchasing:

- *Recognize, describe and define the needs.*
  - a.)Classification of Need
  - b.)Specification of Need
- *Transmit the need (requisitions) or need of requirements*
- *Determine sources, investigate, and select supplier/analyze bids*
- *Make request for the quotations to various suppliers.*
- *Analysis of the available quotations*
- *Negotiations*
- *Prepare and issue the PO*
- *Follow-up the order (including expediting and de-expediting)*
- *Receive and inspect the material (use of receiving report: purchasing, accounting, user, receiving)*
- *Clearance of the invoice and payment to supplier*
- *Close the order/records.*
- 

### **6.8 Modern Techniques of Material Management**

- These are the techniques which has brought a new revolution and great changes in modern industries. It has increased flexibility, reduced carrying costs, wastage, etc.
- The most widely used materials management techniques are the, *ABC classification systems, Just-In-Time (JIT) purchasing, Enterprise Resource Planning (ERP), Kanban card systems, etc.*



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### 6.8.1 JIT (Just-In-Time)

- According to this concept, the size of the purchased quantities is reduced to such an extent that the materials directly reach the production point.
- This results in a reduction in wastage, storage, and maintenance costs.

#### ***Basic objectives/feature of JIT purchasing:***

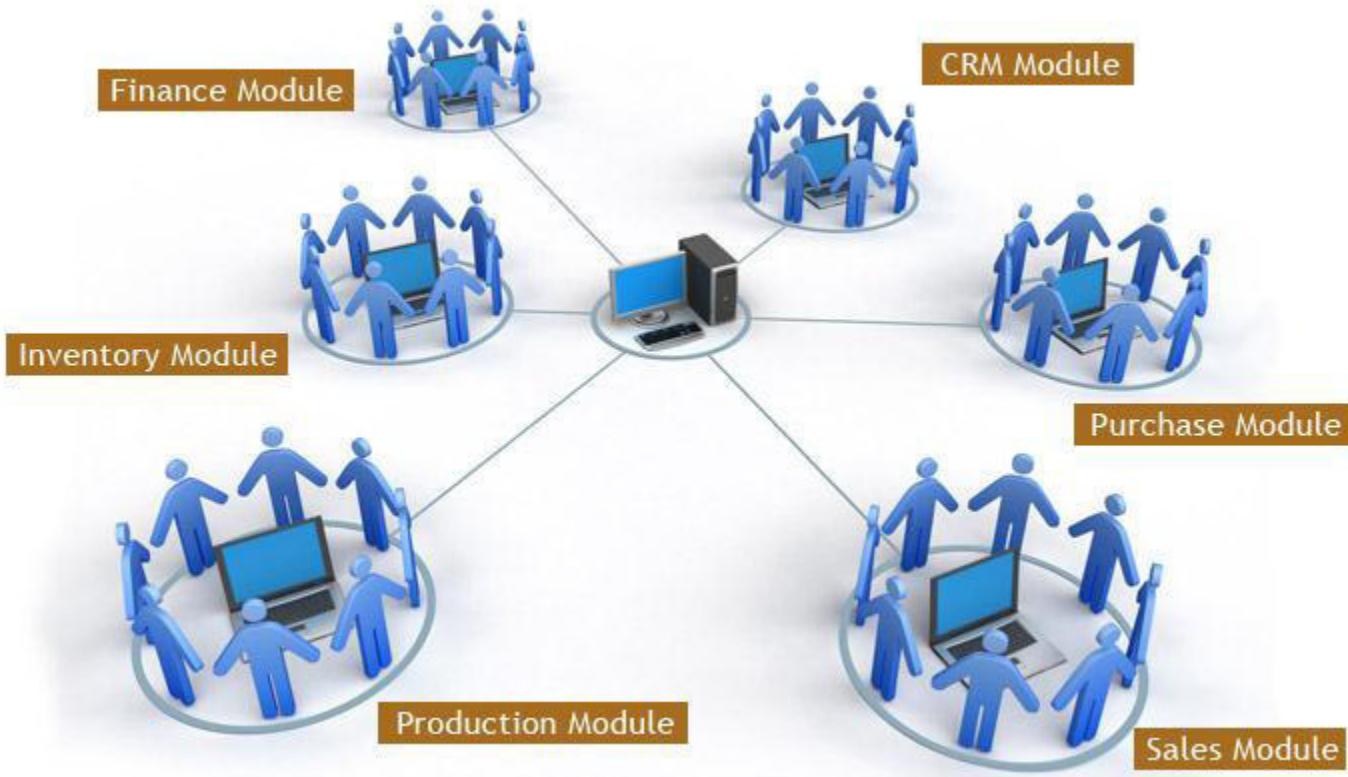
- Buyers and sellers can reach the stage of zero defects through the proper use of JIT systems.
- JIT involves frequent shipments in small lot sizes.
- A firm following the JIT system ensures that the high value components and materials arrive only when they are required. This reduces maintenance costs.
- Delivery delays are avoided by using a good transportation system for transporting materials.
- Standard shipping methods are used to ensure the safe transportation of materials.
- Stable production schedules are developed and communicated to the suppliers.
- Electronic data exchanges are used to provide information about the current status of the production process and the inventory level.
- Buyers and sellers enter into long-term agreements and develop lasting relationships.

#### **Advantages of JIT:**

- Reduced Inventory.
- Improved Quality.
- Lower Costs of the orders.
- Greater Flexibility.
- Increased Capacity.
- Better Human Resources.
- Less time consumption.
- Simplified scheduling and control activities.

### 6.8.2 ERP (Enterprise Resource Planning)

- ERP is a software architecture that facilitates the flow of information among the different functions within an enterprise. Similarly, ERP facilitates information sharing across organizational units and geographical locations.



An ERP system covers the following common functional areas:

- Financial accounting
- Human resources
- Manufacturing
- Supply chain management
- Project management
- Customer relationship management
- Data services

**Advantages of ERP (Enterprise Resource Planning) System:**

- Complete **visibility** into all the important processes across various departments of an organization (especially for senior management personnel).
- Automatic and coherent **work-flow** from one department / function to another to ensure smooth transition/ completion of processes.

- A unified and single **reporting** system to analyze the statistics/ numbers/ status etc in real-time, across all the functions / departments.
- There are **various modules** in an ERP system like Finance/ Accounts, Human Resource Management, Manufacturing, Marketing / Sales, Supply Chain / Warehouse Management, CRM, Project Management, etc.
- Single Database is implemented on the back-end to store all the information required by the ERP system and that enables **centralized storage** / back-up of all enterprise data.
- ERP systems are more **secure** as centralized security policies can be applied to them and all the transactions happening via the ERP systems can be tracked.
- ERP systems make it **easier** for order tracking, inventory tracking, revenue tracking, sales forecasting and related activities.

### 6.8.3 MRP (Material Resource Planning)

**MRP MM** (Material Management) is one of the important modules in ERP software and MM application module supports the procurement and inventory functions occurring in day-to-day business operations.

This MM module contains many aspects such as purchasing, goods receiving, material storage, consumption-based planning, and inventory. MRP MM is integrated with other modules such as Finance (FI), Controlling (CO), Sales and Distribution (SD), Quality Management (QM), Plant Maintenance (PM), Production Planning (PP), and Warehouse Management(WM).

#### Advantages of MRP

- Less Documentation.
- Fast order processing
- Online interaction with suppliers.
- Better control on inventory levels.
- Standardization of each activity in material management

## Chapter-7

### Quality Management



#### 7.1 Introduction to Quality

- Every manufacturing organization is concerned with the quality of its product.
- While it is important those quantity requirements must be satisfied but it is equally important that the finished product meet established specifications.
- Because, customer's satisfaction is derived from quality products and services.

##### 7.1.1 What is Quality?

- *In manufacturing industries, a measure of excellence or a state of being free from (defects, deficiencies and significant variations) is defines as quality.*
- It is achieved through uniformity of a product in order *to satisfy specific customer or user requirements.*
- ISO 8402-1986 standard defines quality as "*the totality of features and characteristics of a product or service that bears its ability to satisfy stated or implied needs.*"



#### 7.2 Quality Circle (QC)

- Dewar, President of the International Association of QCs, defines QCs as "*A way of capturing the creative and innovative power that lies within the work force*".
- According to Maurice Alston, "*Quality Circles are small groups of people doing similar work who, together with their supervisors volunteer to meet for an hour a week to study and solve work related problems which affect them*".
- Quality Circle is a participative management system in which workers make suggestions and improvements for the betterment of organization.



## 7.2.1 Concept of Quality Circle

The Quality Circle concept has three major attributes; these are:

1. QC is a form of participative management.
2. QC is a human resource development technique.
3. QC is a problem solving technique.



## Objectives of Quality Circles

Objectives which contribute to the improvement and development of the enterprise:

1. **To improve the quality and productivity** and thus contribute to the improvements and development of the enterprise.
2. **To reduce the cost of products or services** by waste reduction, safety, effective utilization of resources, avoiding unnecessary errors and defects.
3. **To identify and solve work related problems** that interferes with production.
4. **To tap the creative intelligence of the persons** working in the organization and to make full use of its human resources.
5. **To permit employees to develop and use greater amount of knowledge and skill** and motivate them to apply to a wide range of challenging tasks.
6. **To improve communication within the organization.**
7. **To increase employees' loyalty and commitment** to the organization and its goals.
8. **To enrich human capability, confidence, moral, attitude and relationship.**
9. **To satisfy the human needs** of recognition, achievement and self-development.

## Advantages of Quality Circles:

1. Promote high level of productivity and quality-mindedness.
2. Self and mutual development of employees.
3. Creating team spirit and unity of action.
4. Increased motivation, job satisfaction and pride in their work.
5. Reduced absenteeism and labour turnover.
6. Developing sense of belongingness towards a particular organization.
7. Waste Reduction.
8. Cost reduction.
9. Improved communication.
10. Safety improvement.
11. Increased utilization of human resource potential.
12. Enhancement in consciousness and moral of employees through recognition of their activities.
13. Leadership development.
14. Trained staff.

## 7.3 Quality Assurance

*Quality assurance is systematic process of checking to see whether a product or service being developed is meeting specified requirements and standards.* Many companies have a separate department devoted to quality assurance. A quality assurance system is said to increase customer confidence and a company's credibility, to improve work processes and efficiency, and to enable a company to better compete with others.

### Stages involved in quality assurance:

- Define Objectives.
- Understand Customer needs.
- Design Products.
- Pilot Testing of product
- Process Development.
- Start Manufacturing.
- Life Cycle Management.



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## 7.4 Total Quality Management (TQM)

- *It is the process that suggests that high quality standards (e.g., ISO 9000) should be maintained in other aspects of management such as production cost, marketing, sales promotion, etc.*

Total quality management is based on the four powerful elements:

- i. Focus on customer expectations,
- ii. Employees' involvement,
- iii. Mastery of processes,
- iv. Team work.

### Definition of TQM:

- According to John Gilbert, Total Quality Management is "*A process designed to focus on customer expectations, preventing problems, building commitment to quality in the workforce and promoting open decision-making.*"

### Advantages of TQM

- Strengthened competitive position
- Adaptability to changing or emerging market conditions and to environmental and other government regulations
- Higher productivity
- Enhanced market image
- Elimination of defects and waste

- Reduced costs and better cost management
- Higher profitability
- Improved customer focus and satisfaction
- Increased customer loyalty and retention
- Increased job security
- Improved employee morale
- Enhanced shareholder and stakeholder value
- Improved and innovative processes



## 7.5 Introduction to KAIZEN

- *Kaizen is a system of continuous improvement in quality, technology, processes, company culture, productivity, safety and leadership.*
- The word *Kaizen means "continuous improvement"*. It comes from the Japanese words 改 ("kai") which means "change" or "to correct" and 善 ("zen") which means "good".
- Kaizen is a system that *involves every employee - from upper management to the cleaning crew*. Everyone is encouraged to come up with small improvement suggestions on a regular basis. This is not a once a month or once a year activity. It is continuous.
- In most cases these are not ideas for major changes. Kaizen is based on making little changes on a regular basis: *always improving productivity, safety and effectiveness while reducing waste*.
- Suggestions are not limited to a specific area such as production or marketing. *Kaizen is based on making changes anywhere that improvements can be made*. The Kaizen philosophy is to "do it better, make it better, and improve it even if it isn't broken, because if we don't, we can't compete with those who do."

## 7.6 The 5 'S' Process: Seiri, Seiton, Seiso, Seiketsu, Shitsuke

- *The 5S Process, or simply "5S", is a structured program to systematically achieve total organization, cleanliness, and standardization in the workplace.*
- "5S" was invented in Japan, and stands for five (5) Japanese words that start with the letter 'S': *Seiri, Seiton, Seiso, Seiketsu, and Shitsuke*.

**Table 1. 5S Definitions**

Japanese Term	English Equivalent	Meaning in Japanese Context
<b>Seiri</b>	Tidiness	Throw away all rubbish and unrelated materials in the workplace
<b>Seiton</b>	Orderliness	Set everything in proper place for quick retrieval and storage
<b>Seiso</b>	Cleanliness	Clean the workplace; everyone should be a janitor
<b>Seiketsu</b>	Standardization	Standardize the way of maintaining cleanliness
<b>Shitsuke</b>	Discipline	Practice 'Five S' daily - make it a way of life; this also means 'commitment'



### Seiri

The first step of the "5S" process, seiri, refers to the act of throwing away all unwanted, unnecessary, and unrelated materials in the workplace.

### Seiton

Seiton, or orderliness, is all about efficiency. This step consists of putting everything in an assigned place so that it can be accessed or retrieved quickly, as well as returned in that same place quickly.

### Seiso

Seiso, the third step in "5S", says that 'everyone is a janitor.' Seiso consists of cleaning up the workplace and giving it a 'shine'. Cleaning must be done by everyone in the organization, from operators to managers.

### Seiketsu

The fourth step of "5S", or seiketsu, more or less translates to 'standardized clean-up'. It consists of defining the standards by which personnel must measure and maintain 'cleanliness'.

### Shitsuke

The last step of "5S", Shitsuke, means 'Discipline.' It denotes commitment to maintain orderliness and to practice the first 4 S as a way of life.



## 7.7 Introduction to Six Sigma Process

- **Six Sigma** is a set of techniques, and tools for process improvement. It was developed by Motorola in 1986. Today, it is used in many industrial sectors.
- Six Sigma seeks to improve the quality of process outputs by identifying and removing the causes of defects (errors) in manufacturing and business processes.
- It uses a set of quality management methods, including statistical methods.

Each Six Sigma project carried out within an organization follows a defined sequence of steps and has quantified value targets, for example: reduce process cycle time, reduce pollution, reduce costs, increase customer satisfaction, and increase profits.

### Methodologies of Six Sigma:

#### DMAIC Methodology:

Define --> Measure --> Analyze --> Improve -->Control

- **Define:** Define the Problem or Project Goals that needs to be addressed.
- **Measure:** Measure the problem and process from which it was produced.
- **Analyze:** Analyze data & process to determine root causes of defects and opportunities.
- **Improve:** Improve the process by finding solutions to fix, diminish, and prevent future problems.
- **Control:** Implement, Control, and Sustain the improvements solutions to keep the process on the new course.



#### DMADV Methodology:

Define --> Measure --> Analyze --> Design -->Verify

- **Define:** Define the Problem or Project Goals that needs to be addressed.
- **Measure:** Measure and determine customers needs and specifications.
- **Analyze:** Analyze the process for meet the customer needs.
- **Design:** Design a process that will meet customers needs.



## 7.8 ISO 9001-2000

### ISO 19011:2011

- Guidelines for auditing management systems

### ISO 9000:2015

- Quality management systems -- Fundamentals and vocabulary

### ISO 9001:2015

- Quality management systems -- Requirements

### ISO 9004:2009

- Guidelines for the sustained success of an organization -- A quality management approach

#### Benefits of ISO 9001 to your organization:

- Provides senior management with an efficient management process
- Sets out areas of responsibility across the organization
- Mandatory if you want to tender for some public sector work
- Communicates a positive message to staff and customers.
- Identifies and encourages more efficient and time saving processes
- Highlights deficiencies
- Reduces your costs
- Provides continuous assessment and improvement
- Marketing opportunities

#### Some of the benefits to your customers:

- Improved quality and service
- Delivery on time
- Right first time attitude
- Fewer returned products and complaints
- Independent audit demonstrates commitment to quality

**Top 10 countries for ISO 9001 certificates (2010)**

<b>Rank</b>	<b>Country</b>	<b>No. of certificates</b>
1	China	297,037
2	Italy	138,892
3	Russian Federation	62,265
4	Spain	59,854
5	Japan	59,287
6	Germany	50,583
7	United Kingdom	44,849
8	India	33,250
9	United States	25,101
10	Korea, Republic of	24,778

#### Evolution of ISO 9000 standards

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**1987 version:** Emphasized procedures rather than the overall process of management, which was likely the actual intent.

**1994 version:** Emphasized quality assurance via preventive actions, instead of just checking final product, and continued to require evidence of compliance with documented procedures.

**2000 version:** Emphasized on process management front and center ("Process management" was the monitoring and optimization of a company's tasks and activities, instead of just inspection of the final product).

ISO 9000-2000 Requirements include:

- Approve documents before distribution;
- Provide correct version of documents at points of use;
- Use your records to prove that requirements have been met; and
- Develop a procedure to control your records.

**2008 version:** Emphasized on quality management system being upgraded just needs to be checked to see if it is following the clarifications introduced in the amended version.

**2015 version:**

- ISO 9001:2015 was published by *ISO on 23 September 2015*. The scope of the standard has not changed. However the *structure and core terms were modified* to allow the *standard to integrate more easily with other international management systems standards*.
- The 2015 version is also less prescriptive than its predecessors and focuses on performance. This was achieved by combining the process approach with risk-based thinking, and employing the Plan-Do-Check-Act cycle at all levels in the organization.

**Some of the key changes include:**

- Greater emphasis on building a management system suited to each organization's particular needs
- A requirement that those at the top of an organization be involved and accountable, aligning quality with wider business strategy
- Risk-based thinking throughout the standard makes the whole management system a preventive tool and encourages continuous improvement
- Less prescriptive requirements for documentation: the organization can now decide what documented information it needs and what format it should be in
- Alignment with other key management system standards through the use of a common structure and core text.

**Advantages:**

1. Creates a more efficient, effective operation
2. Increases customer satisfaction and retention
3. Reduces audits
4. Enhances marketing
5. Improves employee motivation, awareness, and morale
6. Promotes international trade
7. Increases profit
8. Reduces waste and increases productivity
9. Common tool for standardization

## **Contents of ISO 9001**

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Outline contents for ISO 9001 are as follows:

- Page iv: *Foreword*
- Pages v to vii: Section 0 *Intro*
- Pages 1 to 14: *Requirements*
  - Section 1: *Scope*
  - Section 2: *Normative Reference*
  - Section 3: *Terms and definitions* (specific to ISO 9001, not specified in ISO 9000)
  - Section 4: *Quality Management System*
  - Section 5: *Management Responsibility*
  - Section 6: *Resource Management*
  - Section 7: *Product Realization*
  - Section 8: *Measurement, analysis and improvement*
- Pages 15 to 22: Tables of Correspondence between ISO 9001 and other standards
- Page 23: *Bibliography*

**Management**  
**Multiple Choice Questions**

**Manufacturing Industries:**

**1. Which out of the following is a mineral based industry?**

- (a) Sugar (b) Tea (c) Coffee (d) Petrochemicals

**2. Which is the only industry in India which is self-reliant?**

- (a) Textile industry (b) Iron and Steel (c) Electrical (d) Sugar

**3. Where was the first textile mill established?**

- (a) Kolkata (b) Mumbai (c) Gujarat (d) Lucknow

**4. Which industry provides employment to weavers at home as a cottage industry?**

- (a) Silk (b) Handspun Khadi (c) Jute (d) None of these

**5. Which country has the largest installed capacity of spindles in the world?**

- (a) Japan (b) Philippines (c) China (d) India

**6. Why is there a need to always import cotton?**

- (a) Obsolete machinery (b) Increasing demand (c) Shortage in the home market (d) Poor quality in the domestic market

**7. What challenge does the Jute industry face in India?**

- (a) Poor labour turnover (b) Low productivity of labour (c) Poor market price (d) Competition from synthetic substitutes

**8. Why is there a tendency of the sugar mills to shift and concentrate in Maharashtra?**

- (a) More water resources (b) Soil is more fertile (c) More land for cultivation (d) Higher sucrose content of cane

**9. Which out of the following industries helps in the manufacture of telephones, computers, radars, etc.?**

- (a) Aluminium (b) Information Technology (c) Steel (d) Electronics

**10. Which country is the largest producer and consumer of steel in the world?**

- (a) China (b) Japan (c) India (d) United States

**11. Which one of the following industries uses Bauxite as a raw material?**

- (a) Aluminium Smelting (b) Steel (c) Jute (d) Cement

**12. Which one of the following industries uses silica as a raw material?**

- (a) Steel (b) Cement (c) Coal (d) Aluminium

**13. Where was the first cement plant set up?**

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(a) Mumbai (b) Chennai (c) Kolkata (d) Pondicherry

**14. Which city in India has emerged as the 'electronic capital' of India?**

(a) Chennai (b) Mumbai (c) Bangalore (d) Delhi

**15. What is the major contribution of the Electronics industry to the country?**

(a) Maximised wealth formation (b) Reduced poverty (c) Improved standard of living (d) Encouraged employment

**16. Air pollution is caused because of the high proportion of undesirable gases such as:**

(a) methane (b) hydrogen (c) sulphur dioxide (d) carbon

**17. When does thermal pollution take place?**

(a) Sun heats up the lakes and ponds (b) Hot water from factories drains into rivers and ponds

(c) When hot oil drains into rivers and lakes (d) None of these

**18. Public sector plants market their steel through:**

(a) TISCO (b) Tata Steel (c) SAIL (d) GAIL

**19. A mechanical means of treating industrial effluents:**

(a) sedimentation (b) rainwater harvesting (c) recycling of waste water (d) biologically

**20. Smoke emitted by chemical and paper factories, refineries, etc. can be reduced by using:**

(a) coal (b) oil (c) gas (d) either (b) or (c)

#### **Answers for Multiple Choice Questions**

1 (d), 2 (a), 3 (b), 4 (b), 5 (c), 6 (a), 7 (d), 8 (d), 9 (d), 10 (a), 11 (a),

12 (b), 13 (b), 14 (c), 15 (d), 16 (c), 17 (b), 18 (c), 19 (a), 20 (d).

**Globalization and the Indian Economy:**

**1. The past two decades of globalisation has seen rapid movements in:**

- (a) goods, services and people between countries
- (b) goods, services and investments between countries
- (c) goods, investments and people between countries
- (d) none of these

**2. The most common route for investments by MNCs in countries around the world is to:**

- (a) set up new factories
- (b) buy existing local companies
- (c) form partnerships with local companies
- (d) both (a) and (b)

**3. Globalisation has led to higher standards of living of:**

- (a) well-off consumers
- (b) poor consumers
- (c) big producers
- (d) small producers

**4. A company that owns or controls production in more than one nation is called:**

- (a) multinational corporation
- (b) joint stock company
- (c) global company
- (d) none of these

**5. Where do MNCs choose to set up production?**

- (a) Cheap goods
- (b) Cheap labour resources
- (c) Economic sustainability
- (d) None of these

**6. Cargill Foods, an MNC has bought over which indigenous Indian company?**

- (a) Amul
- (b) Britannia
- (c) Parakh Foods
- (d) Dabur

**7. Ford Motors entered the Indian automobile business in collaboration with which Indian manufacturer?**

- (a) Mahindra and Mahindra
- (b) Tata Motors
- (c) Maruti Suzuki
- (d) Hindustan Motors

**8. What is happening with the import of Chinese toys in India?**

- (a) Indian toys are selling more
- (b) Indian consumers are buying less
- (c) Indian consumers are getting more choice at cheaper rates
- (d) Chinese consumers are falling short of choice

**9. Trade between countries:**

- (a) determines prices of products in different countries
- (b) decreases competition between countries
- (c) makes a country dependent on the other
- (d) none of these

**10. Globalisation by connecting countries leads to:**

- (a) lesser competition among producers
- (b) greater competition among producers
- (c) no competition between producers
- (d) none of these

**11. One major factor that has stimulated the globalisation process is:**

- (a) effective utilisation of resources
- (b) increase in income and wealth
- (c) willingness to cooperate
- (d) rapid improvement in technology

**12. If tax is imposed on Chinese toys, what will happen?**

- (a) Chinese toy-makers will benefit
- (b) Indian toy-makers will prosper
- (c) Chinese toys will remain cheap
- (d) Indian consumers will buy more Chinese toys

**13. Which out of the following is an example of a trade barrier?**

- (a) Foreign investment
- (b) Delay or damage of goods
- (c) Tax on imports
- (d) None of these

**14. Removing barriers or restrictions set by the government is called:**

- (a) liberalization
- (b) investment
- (c) favourable trade
- (d) free trade

**15. WTO aims at:**

- (a) establishing rules for domestic trade
- (b) restricting trade practices
- (c) liberalising international trade
- (d) none of these

**16. Which out of the following industries has a large number of well-off buyers in urban areas?**

- (a) Footwear
- (b) Automobiles
- (c) Jewellery
- (d) Clothing and accessories

**17. Globalisation has created new opportunities of:**

- (a) employment
- (b) emerging multinationals
- (c) providing services
- (d) all of the above

**18. One major government initiative to attract foreign companies to invest in India is:**

- (a) to raise the standard of education
- (b) to promote unemployment in the public sector
- (c) to build special economic zones
- (d) both (a) and (c)

**19. Globalisation has posed major challenges for:**

- (a) big producers
- (b) small producers
- (c) rural poor
- (d) none of these

**20. With the growing competition, most employers these days prefer to employ workers:**

- (a) flexibly
- (b) quickly
- (c) selectively
- (d) none of these

**21. Globalisation opportunities for paid work for women has denied them:**

- (a) good health
- (b) good education
- (c) permanent job
- (d) none of these

**22. Fair globalisation would mean:**

- (a) fair opportunities for all
- (b) fair benefits for all
- (c) more support to small producers
- (d) all of the above

**23. Government can make globalisation more 'fair' by:**

- (a) increasing competition
- (b) increasing employment
- (c) implementing the labour laws
- (d) imposing trade barriers

**Answers for Multiple Choice Questions:**

1 (b), 2 (c), 3 (a), 4 (a), 5 (a), 6 (c), 7 (a), 8 (c), 9 (a), 10 (b), 11 (d), 12 (b),

13 (c), 14 (a), 15 (c), 16 (b), 17 (d), 18 (c), 19 (b), 20 (a), 21 (c), 22 (d), 23 (c).

### **Industrial Acts & Legislative Laws:**

1, The first Factories Act was enacted in

- a),1881
- b),1895
- c),1897
- d),1885

Answer- a), 1881

2, Who is an adult as per Factories Act, 1948 ?

- a. Who has completed 18 years of age
- b. who is less than 18 years
- c. who is more than 14 years
- d. who is more than 15 years

Answer- a). Who has completed 18 years of age

3, A person who has ultimate control over the affairs of the factory under Factories Act, 1948 is called as \_\_\_\_\_

- a. Occupier
- b. Manager
- c. Chairman
- d. Managing Director.

Answer - a. Occupier

4, The space for every worker employed in the Factory after the commencement of Factories Act, 1948 should be \_\_\_\_\_ Cubic Meters.

- a. 9.9
- b. 10.2
- c. 14.2
- d. 13.2

Answer- c. 14.2

5,The provision for cooling water during hot weather should be made by the organization if it employees \_\_\_\_\_ or more employees.

- a. 200
- b. 250
- c. 300
- d. 150

Answer- b. 250

6,Who is an Adolescent as per Factories Act, 1948 ?

- a. Who has completed 17 years of age
- b. who is less than 18 years
- c. who has completed 15 years but less than 18 years.
- d. None of these

Answer- c. who has completed 15 years but less than 18 years.

7, Which one of the following is not a welfare provision under Factories Act, 1948

- a.Canteen
- b. Creches
- c.First Aid
- d.Drinking water.

Answer- d. Drinking water.

8, First Aid Boxes is to be provided for \_\_\_\_\_ of persons

- a. 125
- b. 135
- c. 150
- d. 160

Answer- c. 150

9,Safety Officers are to be appointed if Organisation is engaging \_\_\_\_\_ or more employees.

- a. 1000
- b. 2000
- c. 500
- d. 750

Answer- a. 1000

10, Canteen is to be provided if engaging employees more than \_\_\_\_\_ persons.

- a. 250
- b. 230
- c. 300
- d. 275

Answer- a. 250

11, Leave with wages is allowed for employees if they work for \_\_\_\_\_ days in a month.

- a. 15
- b. 25
- c. 20
- d. 28

Answer- c. 20

12, Welfare Officers are to be appointed if Organisation is engaging \_\_\_\_\_ or more employees.  
a. 500      b. 250      c. 600  
d. 750

Answer- a. 500

13, The Ambulance Room is to be provided if engaging employees more than \_\_\_\_\_  
a. 400      b. 350  
c. 500 d. 450  
Answer- c. 500

14, Creche is to be provided if \_\_\_\_\_ or more lady employees are engaged.  
a. 25      b. 32  
c. 30      d. 40

Answer- c. 30

15, An adult worker can upto \_\_\_\_\_ hrs in a day as per factories Act, 1948  
a. 8      b. 9  
c. 10      d. 12

Answer- b. 9

16, Obligations of Workers under the Factories Act 1947 was discussed in section \_\_\_\_\_  
a) 78      b) 101  
c) 111      d) 99

Answer - Sec.111

17, The term Sabbatical is connected with  
a) Paid leave for study  
b) Paternity leave  
c) Maternity leave  
d) Quarantine leave

Answer- Paid leave for study

18, Section 49 of the Factories Act 1947 Says about

- a) Welfare officer
- b) Canteen
- c) Rest room
- d) Crèche

Answer is - Welfare officer

19, Section 2 ( K )of the Factories Act 1944 says about

- a) Manufacturing Process
- b) Factory
- c) Worker
- d) None of these

Answer : Manufacturing Process

20, Mention the types of Leave facilities available to a worker under the Factories Act 1947 ?

Annual Leave with wages as per Factories Act

Casual leave as per Standing orders

National & Festival Holiday

Maternity leave

21, If the factory employs more than 1000 workers, they should appoint qualified \_\_\_\_\_ to carry out the prescribed duties

- a) Safety Officer
- b) Welfare officer
- c) Security officer
- d) None of these

Answer : a) Safety Officer

22, For contravention of provisions of Factories Act or Rules, the occupier shall liable for punishment up to

- a) 2 years or fine up to Rs.1,00,000 or both
- b) 6 months or fine upto 10, 000 or both
- c) 3 three years or fine 10, 000 or both
- d) None of these

Answer -

a) 2 years or fine up to Rs.1,00,000 or both.

23, In case of fatal accident occurred inside the factory , a separate accident report shall

be sent to the District magistrate in Form No ---- within 12 hours

- a) Form No:16
- b) Form No:18 A
- c) Form No :18 B
- d) Form No:18

24, Manager of every factory should sent a annual report to the Inspectorate of factories containing details like numbers of workers employed , leave with wages, safety officers ,ambulance room, canteen, shelter, accidents in form no --- on or before 31 st January

- a) Form No : 22
- b) Form No: 21
- c) Form No: 25 A
- d) Form No: 25 B

Answer:

- a) Form No: 22

25, If any employee found violating the section 20 of Factories Act 1947 shall be fine up to

- a)Rs. 10
- b) Rs. 5
- c) Rs. 15
- d) Rs.20

Answer :b ) Rs. 5

26, Section 41- G of the Factories Act 1948 says about

- a) Fencing of machineries
- b) Facing of machineries
- c) Work on near machinery in motion
- d) Workers participation in safety mgt.

Answer-d) Workers participation in safety management

27, Who is responsible for payment to a person employed by him in a Factory under the Payment of wages Act 1936

- a) Accounts Manager
- b) HR manager
- c) Manager
- d) Owner

Answer-Manager of a factory nominated under the section 7 (f) of Factories Act

28, The applicant / occupier who propose to start the factory should submit the

- a).Form No-1
- b)Form No-.2
- c) Form No- 2A
- d) Form No.1 A

Answer- b)Form No-.2

29, The license fee can be paid to get a license for a factory maximum upto

- a).One Year only
- b).Two Years only
- c).Three Years only
- d)Five years only.

Answer- d)Five years only.

30, The occupier has to submit the document on or before----- of every year to renewal of a license for a factory.

Answer- 31<sup>st</sup> October of every year,

31, The renewal application for a license submitted after December 31st of the every year shall paid the fine amount.

- a) 10 % of the license fee
- b) 20% of the license fee
- c) 30 % of the license fee
- d) none of these.

Answer- b) 20% of the license fee

32, The Section 20 of the Factories act discusses about

- 1,Drininkin Water
- 2, Lighting
- 3, Spittoons
- d) Latrines and Urinals

Answer-3, Spittoons

33. The employment of young person on dangerous machines shall be prohibited the section ----- of Factories Act.1947.

- a) Section 21
- b) Section 22
- c) Section 23
- d) Section 24
- e) Answer- c)Section 23

34. A suitable goggles shall be provided for the protection of persons employed in any factory is discussed inn the section ---

- a) Section-36
- b) Section-39
- c) Section-40
- d) Section -35

Answer- d)Section -35

35. A half yearly return for every half of every calendar year , in duplicate in Form ----- so as to reach the inspector of factories on or before ----- of the year

- a) Form NO-20, 31st July
- b) Form No 21, 31<sup>st</sup> July
- c) Form No. 25, 31<sup>st</sup> July
- d) Form No. 24, 31<sup>st</sup> June

Answer- b) Form No 21, 31<sup>st</sup> July

Laws-and-Acts-India--multiple-choice.....

36. An accident report, shall be confirmed by the manager by sending a separate report in form no ----- with details of number of person killed or injured to i) Inspector of Factories within -----hours of the accident .

- a) Form No.18, 12 Hours
- b) Form No. 18.A , 12 Hours
- c) Form No.18, 24 Hours
- d) Form No 18 A , 24 Hours

Answer- a) Form No.18, 12 Hours

36. The particulars of the accident should be entered in separate registers kept as Accident Book- Form No for ESI office .

- a),Form No -14,
- b)Form No –15
- c)From .No-21
- d)From No- 20

Answer- b) Form No –15

37. Section----- of the Factories Act describes about the rights of the workers

- a) 111
- b) 111 A
- c) 110
- d) 112

Answer- b) 111 A

38. The occupier shall be punishable with imprisonment extend to ----- months or fine -----or both for using false certificate of fitness.

- a) two months, 1000 rupees
- b) one year, 2000 rupees
- c) six months, 1000 rupees
- d) one month, 5000 rupees

Answer- a) two months, 1000 rupees

39. Every worker shall have the right to obtain information relating to workers' health and safety work at work.

True / False

Answer- True.

40. The occupier fails to take remedial actions against apprehension of imminent danger to lives or health of the workers ( 41H), shall liable for punishment which may extend to an imprisonment, upto 7 years, fine upto Rupees 2 lacs or both.

- a) 5 Years , Rs25,000
- b) 2 Years, Rs.1, 00,000

**Sample Question Paper****Course Name : All Branches of Diploma in Engineering / Technology****Course Code : EJ/EN/ET/EX/EV/IC/IE/IS/MU/DE/ME/PG/PT/AE/CE/CS/CR/CO/CM/IF/  
CW/EE/EP/EU/CH/CT/PS/CD/ED/EI/CV/FE/IU/MH/MI/TX/TC/FG****Semester : Sixth for EJ/EN/ET/EX/EV/IC/IE/IS/MU/DE/ME/PG/PT/AE/CE/CS/CR/  
CO/CM/IF/CW/EE/EP/EU/CH/CT/PS/TX/TC/FG and Seventh for  
MH/MI/CD/ED/EI/ CV/FE/IU****Subject Title : Management****Subject Code : 17601****Instructions :**

- i) *All questions are compulsory*
  - ii) *First thirty questions i.e. Que 1 to Que 30 carries one mark each*
  - iii) *Que 31 to Que 40 carries Two marks each*
  - iv) *Time allotted for solving online paper is 90 Minutes.*
- 

**Que 1)----- means integrating the economy of a country with global / word economy**

- a) Globalization
- b) Privatization
- c) Liberalization
- d) L-P-G

**Que 2) The goals of the enterprise are fulfilled through the use of resources like**

- a) Man
- b) Machine
- c) Material
- d) All of the above

**Que 3) Globalization increases –**

- a) Employment opportunity
- b) Foreign Investment
- c) Competition
- d) All of the above

**Que 4) India adopted LPG Policy in –**

- a) 1980s
- b) 1950s
- c) 1990s
- d) 1970s

**Que 5) Management theories are interpretive and evolve with organisational change**

- a) It is scientific
- b) It helps decision making
- c) a & b
- d) None of the above

**Que 6)----- is the function of putting together the different parts of enterprise into working order**

- a) Planning

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**b) Management**

- c) Organization
- d) Administration

**Que 7) Who is known as “Father of Scientific Management”**

- a) Henry Feyol
- b) F.W.Taylor**
- c) Gilberth
- d) Juran

**Que 8) Esprit De corps refers to –**

- a) Team Work**
- b) Planning
- c) Co-ordination
- d) Authority

**Que 9) Planning Means-**

- a) Thinking before doing
- b) Thinking after doing
- c) Thinking during doing
- d) All of the above

**Que 10) Policy making in an industry is a role of –**

- a) Management
- b) Administration
- c) Public
- d) Workers

**Que 11) ----refers to the number of sub ordinates a manager can supervise effectively-**

- a) scope of supervisor
- b) Span of control
- c) focus of supervisor
- d) None of the above.

**Que 12) Reliance Industries Ltd. Is a form of -**

- a) Single Ownership
- b) Partnership
- c) Private ltd.
- d) Joint Stock Company**

**Que 13) In ----- type of organization the sub ordinates receive orders from their immediate boss-**

- a) Line organization**
- b) Line and staff organization
- c) Functional organization
- d) Product organization

**Que 14) Amul Dairy industries refers to which of the following company type-**

- a) Private limited company
- b) Ownership company
- c) Partnership company
- d) Co-operative company**

**Que 15) Collapse of crane is a cause of accident. Under which type of accidents does it comes?**

- a) Mechanical causes of an Accident**
- b) Natural Cause of an accident
- c) Human error

d) All the above

**Que 16) Workman's compensation act for workers came in to existence in year –**

a) 1950

**b) 1992**

c) 1986

d) None of the above

**Que 17) Identify the important wale fare provisions in an industry**

a) Canteen

b) Crèches

c) Lunch room

**d) All of the above**

**Que 18) Age, Health, Fatigue and anxiety are the factors refers to-**

a) Environmental causes of accidents

**b) Personal causes of accidents**

c) Mechanical causes of accidents

d) All of the above

**Que 19) Capital invested in Land and machinery is termed as –**

a) Floating capital

**b) Fixed Capital**

c) Sinking Capital

d) Working Capital

**Que 20) Income tax and Property Tax falls under –**

a) Indirect Tax

b) Service Tax

**c) Direct Tax**

d) All of the above

**Que 21) Which of the following comes under the title of “sources of fixed capital”**

a) Shares or Equities

b) Preference shares and Deferred shares

c) Public deposits and Debentures

**d) All of the above.**

**Que 22) Major sources of for obtaining working capital are the commercial banks. They provide finance in the form of:**

a) Loans and credit facilities

b) Overdrafts and mortgages

c) Bills of exchange and public loans

**d) All of the above**

**Que 23) A technique for determining the quantity and timing of dependent demand items -**

a) EOQ

b) ABC analysis

**c) MRP**

d) BOM

**Que 24)The input to MRP –**

a) Master production schedule

b) Inventory record file

c) Bill of materials

**d) All of the above**

- Que 25) Which of the following process includes the activities of planning , scheduling and controlling material.**
- Material Management
  - Resource Management
  - Resource Planning
  - ERP

**Que 26) ----- is a cushion between supply and demand**

- Material Management
- Inventory Management**
- Sales and Purchases
- None of the above

**Que 27)----- is based on a very universal Pareto's Principal that a few high usage value items constitutes a major part of the capital invested in inventories, whereas bulk of items in inventory, having low usage value constitute insignificance part of the capital.**

- EOQ
- ABC Analysis
- a and b both
- None of the above

**Que 28) Identify important constituents of Total Quality Management from Following -**

- |                                |  |
|--------------------------------|--|
| i) Orderliness and Cleanliness | ii) Punctuality and Continuous efforts |
| iii) Customers' Service        | iv) Standardization of work            |
| a) only i                      |  |
| b) only i and ii               |  |
| c)only s                       |  |
| <b>d) i, ii, iii, and iv</b>   |  |

**Que 29) Quality is the responsibility of --**

- all those in concern with product including end user
- all those who are working in the organisation**
- all those who are managers
- all those who are supervisors

**Que 30) Kaizen is a Japanese technique. Kaizen word is formed from two characters KAI and ZEN in which -**

- KAI means change & ZEN means good**
- KAI means good & ZEN means change
- KAI means good & ZEN means GURU
- none of the above

### Two Marks Questions

**Que 31) Which of the for above**

**following pair is true management triangle**



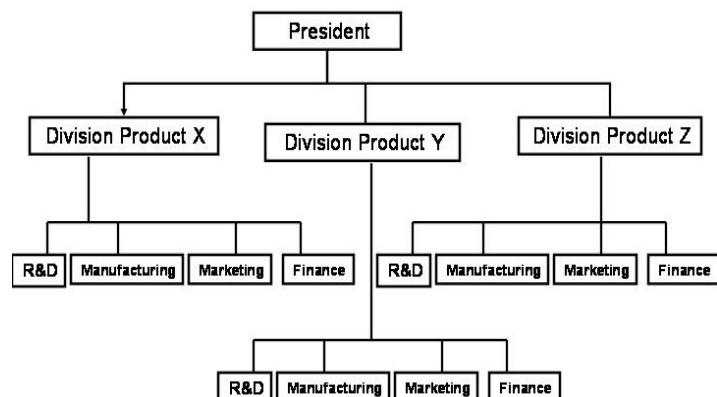
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- a)Top Level –Strategic Decision – Chief Executive Officer
- b)Middle Level –Tactical Decisions– Manager
- c)Lower Level – Operational decisions – Foreman
- d)All of the above

**Que 32)Following are the kinds of partners-**

- a) Active partner and Sleeping Partner
- b) Owner and Distributer
- c)Global Partner and Media Partner
- d)Permanent Partner and Temporary Partner

**Que 33) The type of organisation shown below belongs to which type of organisation structure –**



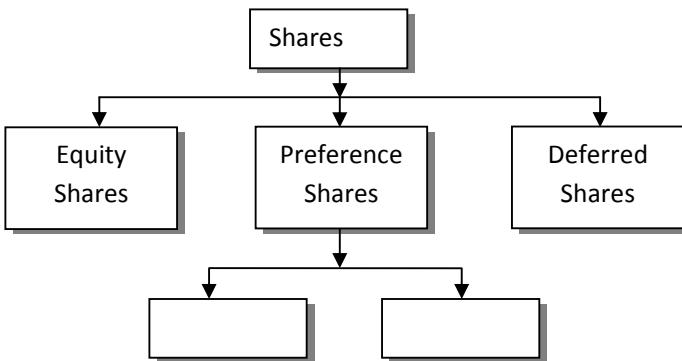
- a) Line Organisation
- b) Line and staff organisation
- c) **Functional Organisation**
- 4) None of the above

**Que 34) Mr. Ramesh is working in ABC Electronics Ltd in the capacity of Foreman. One Day while working in the organization he met with an accident in which he has to lose his right forehand . ABC Electronics is paying him fifty percent of his monthly wages in multiplication with relevant factor. Under which act he is eligible for the said amount?**

- a) Indian Factory Act
- b)Workman's Compensation Act

- c) Minimum wages Act
- d) Safety provisions Act

**Que 35) Suggest the appropriate type of shares in the blank space provided in following figure.**



- a) Cumulative ,Non Cumulative
- b) Cumulative , Ordinary
- c) Non Cumulative , Ordinary
- d) Ordinary , Debentures

**Que 36) Name the type of following budget**

XYZ Instrument Company Limited

No of units to be produced	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total Units
Product A													
Product B													
Product C													

- a) Master Budget
- b) Sales Budget
- c) a and b both
- d) None of the above

**Que 37) Arrange the activities of purchasing procedure in the sequential form**

- |                                      |   |
|--------------------------------------|---|
| i) receipt of quotation              | ii) selection of right source of supply |
| iii) receipt of purchase requisition | iv) making comparative statement        |
| a) i, iii, iv, ii                    |   |
| <b>b) iii, i, iv, ii</b>             |   |
| c) iv, ii, i, iii                    |   |
| d) i ,iv, iii, ii                    |   |

**Que 38) ABC Auto Ltd is a leading automobile company , manufacturing various range of automobiles. The company regularly requires large quantity material particularly raw materials and other essential accessories so that the requirement of the material is ascertained and the job of supplying is entrusted to a firm by calling quotations .Mr. M. Subrmaniyam is an sincere and workaholic person who is recently elevated from Assistant Manager ( R & D) to Manager (Purchases). Company expects that he should set up a structured purchase procedure for such kind of purchases . Suggest which type of purchase procedure does Mr. M. Subrmaniyam should adopt so as to satisfy company's objective of structured purchasing.**

- a) Market purchasing

**b) Rate Contract purchasing**

- c) Global purchasing
- d) Centralised purchasing

**Que 39) Which of the following are two main elements of quality**

- i) Quality of design                    ii) Quality of performance
- iii) Quality of products                iv) Quality circle

**a) i and ii**

b) i and iii

c) ii and iii

d) ii and iv

**Que 40) Match the following- select the proper option**

- l) ISO 9000-2000
  - m) ISO 9001-2000
  - n) ISO9004-2000
- a) l-i, M-iii, n-ii  
**b) l-ii,m-iii, n-i**  
c) l-iii. M-i, n-ii  
d) l-i. M-ii, n-iii

- i) Quality management system guidelines
- ii) Quality management system vocabulary
- iii) Quality management system requirements